**Wonders G2**

Unit 1 Week1

Little Flap Learns to Fly

Little Flap was happy living in his nest. His friends, Fluff and Tuff, lived in the nest next to him. Every morning they sang songs together. Their parents brought them worms to eat.

One day Fluff asked, “Can we get our own worms?”

Tuff said, “We can if we learn to fly.”

Fluff said, “Yes! Let’s learn to fly.”

Little Flap peered over the edge of his nest. It was very high up. When he looked down, the ground seemed very far away. He felt scared! He was too afraid to tell his friends about his fear so he kept his feelings a secret.

Fluff said, “Let’s practice flapping our wings. It will make them strong. Watch.”

Tuff and Little Flap watched Fluff. Then they copied her actions.

Soon it was time to fly. Little Flap could no longer keep his feelings a secret. He asked, “Will I fall? I don’t want to get hurt.”

Tuff said, “You can depend on Fluff and me. We’re your friends.”

Fluff said, “I have an idea. We will go first and show you how. Then you can try. If you fall, Tuff and I will rescue you.”

Tuff said, “Yes, we can save you!” Tuff and Fluff jumped out of the nest. They flew!

Little Flap looked down nervously. He still felt uneasy, but he felt braver with his friends. “Okay,” he said. “Let’s try!”

The three birds stood together on the branch. They counted, “One! Two! Three!” Then they flapped their wings fast and jumped. Little Flap lifted into the air.

“You’re flying just right!” said Fluff.

“You’re flying perfectly!” said Tuff.

All three little birds landed in a patch of soft, green grass.

Little Flap said, “Now I know I can always depend on you, Fluff and Tuff! You are my friends.”

Then he found a big, juicy worm and shared it with his friends.

Now Little Flap likes flying!

Make Connections

Describe how Little Flap depends on his friends. ESSENTIAL QUESTION

Discuss a time when you depended on your friends. TEXT TO SELF

**TOEFL Junior:**

counted (count)

high (height)

**TOEFL:**

actions (action)

edge

essential

landed (land)

longer (long)

nervously (nervous)

perfectly (perfect)

rescue

save

scared (scare)

watched (watch)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week2

Maria Celebrates Brazil

Maria and her family are in their bright, hot kitchen. “Please, Mãe, por favor!” Maria begs.

Mae speaks Portuguese. This is the language of Brazil. “No matter how much you beg or plead, you must go to practice. The parade is next week.”

“It’s not fair,” says Maria in English.

Mãe does not know a lot of English. Maria is surprised when she asks, “What is not fair about going to practice? You must do the right thing.”

“Ana invited me to her house,” Maria answers. “I want to go!”

Pai says, “Maria, the parade is important. People from around the world come to see it. They try our food, see how we dress, and how we live. It is a chance for us to share our culture.”

“I know but I really want to see Ana,” says Maria.

Pai says, “Maria, you can see Ana another time. They are giving out costumes at practice today.”

Maria thinks about her father’s words. Pai is right. She and the other children have worked hard for a year. They practiced their dance steps over and over. They even made their own bright colorful costumes.

“You’re right,” Maria says to her father. “I’ll go to practice. I’ll tell Ana I cannot visit her.”

One week passes. Lots of people line the streets. The children in Maria’s group are wearing their sparkling costumes. They know each dance step. They dance to the beat.

The crowd moves aside as they make their way down the street.

When the crowd moves away, Maria sees a woman with a camera. She is hurrying. The woman scurries by Maria. She puts her camera to her eye. Maria smiles from ear to ear. She is excited to be in the parade. Click! The woman takes a picture of Maria. Maria is proud of her hard work!

Make Connections

How is Maria’s family the same and different from other families you know? ESSENTIAL QUESTION

Complete Maria’s family to your own family. TEXT TO SELF

**TOEFL Junior:**

favor (favorable)

parade

**TOEFL:**

beat

complete

costumes (costume)

essential

parade

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week3

Finding Cal

September 25

Dear Diary,

It took Dad a long time to decide. He finally made up his mind. Dad came to my room tonight. He said I could get a dog! But it has to be a small or medium-sized dog. We will go to the animal shelter tomorrow.

September 26

Dear Diary,

Wow! There are so many different dogs at the shelter. There are big and little dogs. Some have soft fur and some have wiry hair.

Dad and I walked to one dog’s cage. The tag said the dog’s name was Cal. One quick glance at the cute dog, and I knew he was for me. Dad said, “Look, Jake! Look at how Cal stares at you.” It was true! His eyes were wide open. He was looking right at me.

We put Cal on a leash and took him to a fenced yard. Cal smiled and stared at me. Cal wanted to play. In minutes he learned the proper, or correct, way to sit. He could walk on a leash nicely, too. I patted him on the head, and he licked my hand.

Dad said, “I see a real connection between you and Cal.” I agreed. We already had a good relationship.

Soon we were on our way home. Cal was nervous so I tried to make him feel better. I scratched his ears, and he liked it.

October 10

Dear Diary,

It has been a while since I have written. Cal has learned many new tricks like how to roll over. I have learned from Cal, too.

Cal walks with Dad and me to school every day. Each night, Dad reads me a story. Cal lies next to me. I would not trade him for any other dog. I will keep him because our friendship is very special. Finding Cal was worth the wait!

Make Connections

How is Cal an important friend to Jake? ESSENTIAL QUESTION

Compare Jake’s pet Cal to your pet or a pet you know. Tell how each pet is a good friend. TEXT TO SELF

**TOEFL Junior:**

medium

proper

**TOEFL:**

correct

decide

essential

finally(final)

head

leash

long

medium

minutes (minute)

nervous

roll

scratched (scratch)

tag

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week4

Taking Care of Pepper

Have you ever been on a farm? Jack lives on a farm. He has a horse named Pepper. Jack helps take care of Pepper. Looking after a horse is a big job. A horse has many needs. There are a lot of things a horse must have to live.

Every morning, Jack wakes up at 5:00 a.m. He and his father go to Pepper’s stall. The stall keeps Pepper safe from bad weather and other dangers.

When Pepper sees Jack, the horse gets excited. Jack smiles when the horse gets all worked up.

First, Jack gives Pepper hay to eat. While Pepper eats, Jack cleans Pepper’s stall. He shovels out the dirty hay and sawdust. Then he puts down fresh padding.

Next, Jack strokes Pepper’s brown coat and it feels smooth. Then Jack leaves to go to school. But his work is not done!

At 3:00 p.m., Jack rides the bus back home. He has a snack and does his homework. Next, his mother gives him an apple for Pepper. Then they go to visit Pepper.

Jack and his mom find Pepper in a field. Pepper is allowed to roam. He can walk all around the field. He was drinking after having wandered the field. All that walking here and there made Pepper thirsty!

Now it is time for Pepper’s exercise. In the wild, horses run many hours a day.

Jack puts the saddle on Pepper. He places the bit in Pepper’s mouth. Mom does the same thing with her horse, and they ride horses together.

When they are finished riding, Jack grooms Pepper. He brushes his mane, tail, and fur.

Finally, Jack gives Pepper more hay and refills his water bucket. “See you in the morning,” Jack says. Pepper nods his head as if to say, “Yes, I’ll be waiting!”

Make Connections

How do people care for horses? ESSENTIAL QUESTION

Compare the needs of a horse and another pet you know. Which needs more care? TEXT TO SELF

**TOEFL Junior:**

**TOEFL:**

apply(application)

checks (check)

dangers (danger)

essential

head

nods (nod)

stall

weather

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week5

“Families Work!”

Ellen Yung had a busy day at work! She put a cast on a broken arm, used a bandage to cover a deep cut, and helped twenty patients. Ellen is a doctor for children. Customers can get sick at any time, so pediatricians work long hours. They have hard jobs.

Ellen’s husband works long hours, too. Steve is a firefighter. At the fire house, he makes sure the tools work properly. He checks the hoses and fire trucks. At the fire, Steve rescues people from hot flames and smoke. The firefighters all work together to put out the fire.

At home, the Yung family works together too. Hanna sets the table for dinner. She also helps wash the dishes. Everyone has weekly chores. Mom and Hanna do the dusting and mopping. Dad and her brother, Zac, do the laundry. They wash, dry, and fold the clothes. Mom makes a shopping list each week. She lists items they need and things they want.

A short time ago, Zac wanted a new laptop. The family needed a new washing machine. They could only spend money on one item. Both cost the same. They had to choose. Clean clothes are needed for school and work. A new laptop is nice, but did Zac need it? Ellen and Steve thought about their family’s needs. They decided to buy the washing machine.

TIME FOR KIDS

What Are Some Needs and Wants?

|  |  |
| --- | --- |
| Needs | Wants |
| Water | Skateboard |
| Food | Video game |
| Shelter | Basketball |
| Clothing |  |

Zac knows that his parents have busy jobs. They bring home money to pay for their needs and wants. They needed that washing machine. Zac still wants a laptop. The family has decided to save some money each week so they can buy it in the future.

Make Connections

How does the Yung family work together? ESSENTIAL QUESTION

How is your family similar or different from the family in the story? TEXT TO SELF

**TOEFL Junior:**

properly (proper)

**TOEFL:**

checks (check)

choose

chores (chore)

clothing

cover

customers (customer)

decided (decide)

essential

finally(final)

long

rescues (rescue)

save

sick

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week1

A Visit to the Desert

Tim was looking forward to this vacation. Then his parents told him the family would be visiting Grandma in Nevada. Tim was unhappy. He wanted to be with his friends this summer.

“Grandma is eager to see you,” Mom said. “She can’t wait to take you on a desert hike.”

The next morning Grandma met them at the airport. Then they drove to the desert. As they hiked, Grandma explained that animals enjoy the open desert space. It gives them the freedom to move from place to place. Tim learned that the animals find ways to adapt to the hot desert weather. He wondered if he could get used to the desert climate.

“Wow,” Tim said, “Look at that! The turtle carries its home on its back!”

Grandma smiled at Tim’s excitement. “Actually,” she said. “That is a desert tortoise. It looks for the shade made by the shadows of rocks. That’s how it cools off. He burrows underground to get away from the heat.” The tortoise disappeared into its burrow. Tim leaned over the hole. He could not hear a sound.

“I’ll bet it likes the silence of its burrow,” Tim whispered.

“I think it likes its sense of safety too,” Grandma added.

“That’s the same feeling I get at home,” Tim sighed. Just then a large rabbit hopped by. Grandma explained that the jack rabbit's large ears help it stay cool.

“These animals are so unlike the animals at home!” Tim said. He had forgotten about the desert heat

“Some animals stay cool by sleeping during the day. Then they hunt at night,” said Grandma. A Great Horned Owl hooted above them. Grandma said, “It will soon be time for the owl to hunt.”

“Which means it’s time for us to head back,” Dad added.

“Aw, this vacation is going by too fast,” Tim said. They asked Tim about the heat. “What heat?” Tim asked. “I feel as fresh and cool as a new flower. I’ve adapted!” Everyone laughed.

Make Connections

How does the desert tortoise survive in the heat? ESSENTIAL QUESTION

Think of another animal you know. How does it survive in its climate? TEXT TO SELF

**TOEFL Junior:**

adapted (adapt)

drove (drive)

during (duration)

**TOEFL:**

adapt

actually (actual)

appeared(appear)

climate

desert

eager

essential

excitement

head

hike

means (mean)

shade

sighed (sigh)

survive

weather

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week2

The Boy Who Cried Wolf

Long ago a shepherd boy sat on a hilltop watching the village sheep. He was not fond of his job. He didn’t like it one bit. He would have liked something wonderful to happen, but nothing remarkable ever did.

The shepherd boy watched the clouds move softly by to stay busy. He saw horses, dogs, and dragons in the sky. He made up stories with these things as characters.

Then one day he had a better idea! He took a deep breath and cried out, “Wolf! Wolf! The wolf is chasing the sheep!”

The villagers ran up the hill to help the boy. When they got there, they saw no harmful wolf. The boy laughed. “Shepherd boy! Don’t cry ‘wolf!’ unless there really is a wolf!” said the villagers. They went back down the hill.

That afternoon the boy again cried out, “Wolf! Wolf! The wolf is chasing the sheep!”

The villagers ran to help the boy again. They saw no wolf. The villagers were angry. “Don’t cry ‘wolf!’ when there is NO WOLF!” they said. The shepherd boy just smiled. The villagers went quickly down the hill again.

That afternoon the boy saw a REAL wolf. He did not want the wolf to grab any of the sheep! The boy thought the wolf would snatch one of them for a delicious, tasty meal. A sheep would be a big feast for a wolf. He quickly jumped to his feet and cried, “WOLF! WOLF!” The villagers thought he was tricking them again, so they did not come.

That night the shepherd boy did not return with their sheep. The villagers found the boy weeping real tears. “There really was a wolf here!” he said. “The flock ran away! When I cried out, ‘Wolf! Wolf!’ no one came. Why didn’t you come?”

A kind man talked to the boy as they walked slowly back to the village. “In the morning, we’ll help you look for the sheep,” he said. “You have just learned one of life’s important lessons. This is something you need to know. Nobody believes a person who tells lies. It is always better to tell the truth!”

Make Connections

What did you learn after reading this animal story? ESSENTIAL QUESTION

Tell how you are similar or different from the shepherd boy. TEXT TO SELF

**TOEFL Junior:**

remarkable

**TOEFL:**

characters (character)

delicious

essential

grab

long

remarkable

watching (watch)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week3

A Prairie Guard Dog

I am on a journey. My trip is to a prairie. It is in the outdoor world called nature. Many animals live in a prairie habitat. This place has what prairie dogs need to survive. A prairie has a lot of grasses but few trees. Without places to hide, a prairie can be dangerous for some animals.

**Good Morning!**

It is early in the morning. First, I see a prairie dog. I name him Pete. He peeks his head out of his burrow underground. He looks around. Then Pete calls loudly to his family, “Yip!” He lets them know it is safe to come out. Soon four prairie dogs come out.

Pete is the guard and he is restless. He cannot rest because he is always looking around for danger. This allows the other prairie dogs to safely munch on grasses and seeds. They can also groom each other or work on their burrow.

**A Scare**

Oh no! Pete spies a large badger! When he sees it, he gives a loud bark, “Yap! Yap!” His family recognizes the warning. Some hide in tall grasses, and some jump into the burrow. The badger runs at Pete, but the watchful guard is able to escape into the burrow. I am glad he is able to get away from danger.

After a few minutes, Pete peeks his head out again and he is back on the job.

**Break Time**

The sun gets higher, and it is hot now. The prairie dogs slip into their deep burrow where it is cooler. Even Pete goes in. **Tunnels**, like hallways, lead to different areas. There is a sleeping room. There is a room used like a bathroom. The prairie dogs cover up roots and seeds in one room Later, they eat the buried food there.

**Second Shift**

I keep watching the burrow. Finally, the sun begins to set and a different prairie dog peeks its head out. I name him Gary. Pete must be off duty. “Yip,” Gary calls. The other prairie dogs come back out.

|  |  |
| --- | --- |
| Prairie Dog Facts | |
| Size | 12 to 15 inches tall |
| Weight | 2 to 4 pounds |
| Habitat | short and medium grass desert prairies |
| Food | roots, seeds, leaves of plants, grasses |
| Shelter | underground burrows with many rooms |
| Predators | coyotes, bobcats, badgers, foxes, weasels |

The prairie dogs eat and play until the moon is high in the sky. Then they go to sleep in their burrows. I wonder if Pete will be back on duty. I will see in the morning.

Make Connections

What are two features of a prairie dog’s habitat? ESSENTIAL QUESTION

What animal did the prairie dog remind you of? TEXT TO SELF

**TOEFL Junior:**

higher/ high (height)

medium

slip

**TOEFL:**

area

communicate

cover

dangerous

danger

desert

essential

finally(final)

head

later (late)

lead

medium

minutes (minute)

recognizes (recognize)

remind

scare

survive

warning (warn)

watchful (watch)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week4

Eagles and Eaglets

Bald eagles are birds. The baby birds, or offspring are called eaglets. Let’s read about how eaglets are like their parents.

**It’s Nesting Time**

All birds lay eggs. Bald eagles build their nests in the tops of trees so the eggs will be safe. Their nests are built of sticks and grass. They add on to their nests each year. They can become huge! These giant nests can be as large as nine feet across. That’s bigger than your bed!

The mother eagle lays from one to three eggs. She sits on her eggs until they hatch. Then both parents watch over the nest.

**Proud Parents**

At first the eaglets are helpless. They cannot walk. They need their parents for food. They also cannot see well. Birds are not mammals. They do not have milk to feed their young. They hunt for food. Eaglets also need their parents for safety.

**Eaglets Grow Up**

Bald eagles use their sharp eyes to hunt. They use their strong wings to fly fast. They also use their claws and beak to catch fish. Young eaglets must learn all these things. Then they can live on their own.

Unlike mammals, birds have feathers, not fur. An eaglet is born covered with soft gray down. It cannot fly until it grows dark feathers like its parents. The eaglet stays near the nest until its wings grow strong. That takes about five months.

An eaglet becomes an adult when it has learned to do all the things its parents do. This takes about five years. Bald eagles can stay alive for up to thirty years.

**Bald Eagles Soar**

Once it learns to fly, tire bald eagle can soar for hours. The bald eagle must take good care of its feathers. It uses its beak to groom itself. It must keep its feathers clean. Can you believe this powerful eagle began life as a helpless baby?

Make Connections

How is the eaglet like its parents? How is it different? ESSENTIQAL QUESTION

Compare how your parents and eagle parents take care of their young. TEXT TO SELF

**TOEFL Junior:**

giant

sticks (stick)

**TOEFL:**

adult

bald

clean

covered (cover)

hatch

helpless

mammals (mammal)

offspring

sharp(sharpen)

sticks (stick)

watch

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week5

“Cats and Kittens”

Cats and kittens express their views

With hisses, purrs, and little mews.

Instead of taking baths like me,

They use their tongues quite handily.

I wonder what my mom would say

If I tried cleaning up that way.

They stay as still as still can be,

Until a mouse they chance to see.

And then in one great flash of fur

They pounce on a toy with a PURRRR.

----by Constance Keremes

Desert Camels

Camels have a hump on their backs

To carry people and their sacks.

They’re very strong, don’t mind the Sun,

Won’t stop for drinks until they’re done.

They give people a bouncy ride.

They sway and move from side to side.

I’d like a camel for a pet,

But haven’t asked my mother yet!

----by Martine Wren

A Bat Is Not a Bird

A bat has neither feathers nor beak.

He does not chirp, just gives a shriek.

He flies by hearing sounds like pings,

Flapping, flapping his leathery wings.

At night when I’m asleep in my bed,

He gets to fly around instead!

----by Trevor Reynolds

Make Connections

Talk about what the poet loves about the animal in each poem. ESSENTIAL QUESTION

Describe how your favorite animal behaves. TEXT TO SELF

**TOEFL Junior:**

**TOEFL:**

behave

chirp

cleaning (clean)

desert

essential

hump

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week1

Magnets Work!

Did you know magnets are all around you? Magnets help you do amazing things! Keep reading! See if you think magnets have surprising uses.

**Magnets Pull**

Look closely and you will see. Magnets can be found on a can opener. The magnet attracts, or pulls, the lid off of a soup can. A push or pull is called a force.

There is also a magnet in a refrigerator. It pulls the metal in the door to make a tight seal. Do you know how?

A magnet’s force pulls objects made of metals called iron and steel. It will not pull other things. It will not pull a wooden pencil or a plastic toy. A magnet does not attract all items.

**Magnets Have Poles**

You have proved, or shown, that magnets can pull some things to it. Why is this true? The two ends of a magnet are its poles. Every magnet has a north pole and a south pole.

Have you ever played with trains that have magnets? Sometimes, you try to put two train cars together, but they repel. This means they push away from each other.

Then you turn one of the cars around. The two cars snap together as quick as a wink. That’s right! If you have played with these trains, you know it is true.

When the brain cars push away, two of the same poles are facing each other. However, if you put the north and south poles together, they will snap together like the train.

**Magnets Can Be Powerful**

We know that magnets can move objects- But does the heaviness of an object matter? Can magnets move objects that have different weights? Yes, they can.

Scientists are using magnets in new ways. People often wish they could travel at a faster speed than a train.

There is a new train that uses powerful magnets to travel more quickly. Magnets lift the train above the track and push the train forward. The train appears to be moving as fast as lightning! Scientists have measured these train speeds. They are much faster than the trains we know.

Can you imagine what magnets will help us do in the future?

Make Connections

What are two ways we use magnets? ESSENTIAL QUESTION

Tell about a time when you have used a magnet to push or pull something. TEXT TO SELF

**TOEFL Junior:**

snap

**TOEFL:**

amazing (amaze)

appears(appear)

brain

imagine(imaginary)

means (mean)

repel

snap

speed

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week2

Starry Night

Josie and Ling were good friends. Ling was happy Josie was her neighbor. Josie was happy Ling lived nearby, too.

Josie and Ling couldn’t wait for the school day to end. They planned a sleepover at Josie’s house. They were going to sleep in a tent in Josie’s backyard.

As the class was leaving, Mr. Cortes said, “Your weekend homework is to look at the nighttime sky and explain what you saw on Monday.” The class grumbled. “Why the unhappy sounds?” Mr. Cortes asked. “It will be fun looking at the sky at night.”

The girls arrived at Josie's house and were delighted to be sleeping outdoors. Josie said, “I’m so happy that we get to sleep in the tent. It will be lots of fun.” Then Ling said, “I’ll get the sleeping bags and flashlights. I brought flashlights so we can play games in the tent.”

Josie’s dad poked his head inside the tent. “Girls, it is a good time to do your homework now because it is getting dark,” he said. “Awww,” they both complained. “Dad,” said Josie, “Do we have to, now?”

“Yes, I already set up the telescope.”

Ling said, “I hope this won’t take too long.” Josie looked up and spotted a crescent moon. “Did you know the moon’s light comes from the sun?’ said Josie. “It’s funny that it's called moonlight.” “Yes,” said Ling, who was still thinking about playing in the tent.

Josie’s dad smiled at the girls and said, “See the stars in the sky? Those points of bright light can form shapes.”

“You can see the Big Dipper,” he said.

“It’s a group of stars that look like a giant spoon in the sky.”

Josie’s dad showed her how to look through the telescope. “Wow, that’s more stars than I ever dreamed of. I never imagined there could be so many.”

It was Ling’s turn to look. Ling cried out, “I see a bright light moving in the sky!”

“That’s a shooting star!” said Josie’s dad.

“This is fun,” said Ling. “I really enjoy looking at the stars.”

“I think we’ve seen enough of the nighttime sky,” said Josie’s dad. “You girls can go play now.”

“Aw, Dad, can’t we keep looking?” asked Josie. “This is really fun.”

“Yes,” said Ling. “We have had an adventure already, and we haven’t even played in the tent yet!”

“You’re right, Ling, said Josie. “This has been one exciting night.”

Make Connections

What did you learn about the nighttime sky after reading this story? ESSENTIAL QUESTION

Compare what the girls saw in the nighttime sky to what you have seen in the nighttime sky. TEXT TO SELF

**TOEFL Junior:**

complained (complaint)

giant

spotted (spot)

**TOEFL:**

complained (complaint)

essential

grumbled (grumble)

head

imagined(imaginary)

long

spotted (spot)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week3

Lighting Lives

When Debby Tewa was your age, her home had no electricity. She could not flip a light switch to read at night. She lit a candle. She could not cook on a stove or in a microwave oven. Her family cooked over a fire.

Debby lived in Arizona. When she was ten, she moved to a new home. Her new home had electricity! She could turn on a lamp and use a phone. She liked it!

As she grew, Debby realized she wanted to learn more about solar power. Solar power is electricity that comes from the sun. Solar panels are put on the roof of a building. The sunlight hits these panels and turns the sunlight into electricity.

Debby thought a lot about solar power. Then she had an idea! She was excited. She went to work for a company that provided solar power to people’s homes. She believed it would be a good solution for people who had no electricity. Debby likes solving problems!

Debby also thought of people in villages like the one she lived in as a child. The people in these small towns did not have any electricity. Solar power would work well there because there is a lot of sun in Arizona. Debby decided to help these families get solar power.

To get a family started, Debby helps them borrow money from a bank to buy the panels. After they get the money from the bank, they have some time to pay the money back. And the good news is there is no cost for using the sun’s power!

Debby travels across lands outside cities in Arizona and New Mexico. She travels to the countryside. She helps Hopi and Navajo people get solar power.

Debby believes deeply in her work and insists that families learn about how solar power can help them. They are happy to do what she demands. Debby also travels to schools and summer camps to teach Hopi children about solar energy.

Debby drives her truck from place to place. It is lonely with no one riding along. Then she thinks about how exciting it was to use electricity for the first time. Now families can do the things you do without thinking about them. They can heat their homes or turn on a light! Debby says she is, “lighting up people’s lives.”

Make Connections

How does Debby help her community? ESSENTIAL QUESTION

Talk with a partner about solar power. Could you use it where you live? TEXT TO SELF

**TOEFL Junior:**

drives (drive)

provide

solar

**TOEFL:**

age

community

company

decided (decide)

essential

flip

insists (insist)

lands (land)

provided (provide)

realized (realize)

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week4

Tornado!

**What Is a Tornado?**

The sky is dark far away. Something moves down from the clouds. It spins across the land. It sounds like a very loud train. A tornado is coming!

A tornado is a spinning cloud. It is shaped like a funnel. Its winds can reach 300 miles per hour. That is faster than a race car. The spinning air pulls things up. It can toss a car in the air. It can even destroy, or ruin a house. A tornado can be dangerous. It can cause harm to people and places.

**How Does a Tornado Form?**

A tornado is a kind of weather. Weather is the condition of the air. Most tornadoes begin as a kind of weather called a thunderstorm. Thunderstorms are harsh rainstorms with thunder and lightning. These rough storms have high winds and heavy rain. When high winds spin and touch the ground, a tornado is born.

Most tornadoes do not stay on the ground for long. When they do, they can cause a lot of damage, or harm. A tornado is a big event!

**Where Do Most Tornadoes Happen?**

More tornadoes happen in the United States than anywhere in the world. Most of them form in the middle part of our country. Scientists think this might be because warm, wet air from the Gulf of Mexico crashes with the cool, dry air from Canada. This area is known as Tornado Alley.

**How do Tornadoes Affect People?**

Tornadoes affect people and towns in many ways. Weak tornadoes break branches from trees or damage signs. Strong tornadoes can destroy buildings.

People who live in areas where there are many tornadoes always think about the weather. They listen to the radio and watch news reports on television. Schools provide tornado drills so children can practice being safe in the event of a tornado. Teams of people work together to repair the damage caused by a tornado.

**How Can You Stay Safe?**

There are ways to prevent, or stop harm during a tornado. News reports use the words tornado warning to give notice that a tornado has been seen. Following safety rules can help everyone stay safe during a tornado!

Make Connections

How do tornadoes affect us? ESSENTIAL QUESTION

Compare what you read about tornadoes to an experience you have had with the weather. TEXT TO SELF

**TOEFL Junior:**

during (duration)

high (height)

provide

race

**TOEFL:**

affect

area

cause

condition

crashes (crash)

dangerous

directions (direct)

essential

experience(experienced)

harsh

land

prevent

provide

rough

warning (warn)

watch

weather

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week5

They’ve Got the Beat!

Some students in New York really sing their hearts out! That’s because they are in the school chorus at Public School 22.

These students from Staten Island had a concert at the White House. They sang at a Hollywood awards show. Audiences have clapped and cheered them on. These kids are always asked to return.

How does it feel to sing on stage? “I get nervous singing for a big audience,” Brianna Crispino recalls. “But when I see the joy on their faces, I get excited.”

**Sounds Good**

The P.S.22 chorus is divided into two groups. The sopranos sing high notes. The altos sing lower sounds. Instruments like drums sometimes keep the beat. It’s important to keep the rhythm so they make the right sounds together.

Most adult choruses have four groups of voices. Here’s a look at the number of each type of voice in one adult chorus from Pennsylvania.

**Musical Expression**

Being part of the chorus is hard work. The chorus members won’t disagree. They practice for three hours each week.

Gregg Breinberg, their teacher, encourages the chorus to use movements. They move their hands to show how the songs make them feel. “They have their own movements because nobody feels music the same way,” he explains.

The chorus members understand that singing in a chorus is a big job. “We just want to give it our best!” one student says.

Make Connections

How do the singers in the chorus express themselves? ESSENTIAL QUESTION

How is this the same or different from what you know about singing? TEXT TO SELF

**TOEFL Junior:**

awards (award)

divided (divide)

high (height)

number

**TOEFL:**

adult

accompany

audience/audiences(audience)

beat

chorus

company

concert

divided (divide)

encourages (encourage)

essential

instruments (instrument)

nervous

recalls（recall）

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week1

Alaska A Special Place

Where can you find mountains, glaciers, and volcanoes? Alaska is the location you would visit. Alaska has different regions. In each part of the state, there are different features.

**Land Features**

The tallest mountain in the United States is in Alaska. It is called Mt. McKinley. Some people go to Alaska just to climb it.

Alaska also has the biggest glaciers in all of the United States. Glaciers are made when one layer of snow falls on top of another. The snowfall becomes very thick. It turns to ice. The growth of a glacier takes many years to form.

**Temperature Changes**

Alaska has different temperatures. Northern Alaska is called the Arctic region. The temperatures are much colder than inside your freezer. The ground, lakes, and rivers are almost always frozen.

As a result, most people live in the south of Alaska. It is warmer there. Crops grow well in the rich soil there.

**Animals**

Alaska has many different animals. You may spot a walrus or polar bear among the glaciers. You can see a black or brown bear fishing in a river or stream. In another region, you can see a moose or caribou.

**Daylight and Darkness**

The seasons are special here, too. In summer, people celebrate the mild temperate weather. These lively people also celebrate the sunlight because the sun does not set for many days. In one village, the Sun doesn’t set for more than 80 days! You might be in bed and still see the sun shining.

In winter, the Sun doesn’t rise in some places in Alaska. These places have more than 60 days of winter darkness. You could have afternoon soccer practice in the dark! You might think this would be eerie, but Alaskans don’t think this is weird. They are used to the dark winter days.

Alaska is a very interesting place to live!

Make Connections

What are three things that make Alaska interesting? ESSENTIAL QUESTION

How is where you live different from Alaska? How is it the same? TEXT TO SELF

**TOEFL Junior:**

mild

spot

**TOEFL:**

bear

essential

interesting (interest)

land

spot

temperature

volcanoes (volcano)

weird

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week2

Into the Sea

**What Is Erosion?**

Have you ever made a sand castle at the beach? You must pick a good spot for it. If it is too close to the water, waves will quickly wash it away.

Ocean waves and wind can also wash away land. They can change the shape of an island, which is land circled by water. When wind and water change the shape of Earth, it is called erosion.

Waves are the biggest cause of erosion at the beach. Ocean waves are always active and moving onto the shore. They carry the sand away bit by bit.

Strong waves are one of the properties of big storms. These waves explode as they crash onto the beach. Storm waves can move a lot of sand quickly.

**Erosion of Beaches**

Some people build houses near the ocean. Waves take away the sand between the houses and the sea. As the beach disappears, the water gets closer to houses and other solid buildings on the beach. Some buildings can even be washed away.

**Erosion of Rocks**

Erosion also happens on steep, rocky cliffs or sharp slopes. First, waves smash into the bottom of the cliffs. Then they carry away tiny pieces of rock. Over time, many small pieces of rock wash away from the bottom of the cliff. This makes the top of the cliff weak. The cliff can crumble and fall into the sea.

**Stopping Erosion**

Some local communities work to stop erosion to nearby beaches. These towns have built sea walls of large boulders or rocks

The rocks are placed in a row in the sea. When waves hit the sea wall, they slow down. Then the waves can’t pull sand away.

Some towns make rules about buildings on the beach. New buildings must be far from the water. Then they won’t wash away like a sand castle.

Make Connections

How does beach erosion change the Earth? ESSENTIAL QUESTION

How do the changes from erosion in this selection compare to other changes in nature you have seen? TEXT TO SELF

**TOEFL Junior:**

cliffs (cliff)

explode

smash

spot

**TOEFL:**

active

disappears(appear)

crash

crumble

erosion

essential

explode

land

selection(select)

sharp(sharpen)

slopes (slope)

smash

spot

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week3

Happy New Year!

I celebrated the New Year twice in one year. Do you wonder how? I celebrated the holiday in the United States and then in China.

On December 31, our city had a celebration to welcome the New Year. This celebration began with a parade. A band played music, and I got my face painted like a lion. Then I watched a man carve animals from ice. We were surrounded by fun!

Just before midnight, everyone went to the park. The crowd counted down the last seconds of the old year. Then came my favorite part, the thing I like most. Pop! Pop! Pop! Fireworks like a shower of colorful lights sprinkled down from the sky. Then my family took a plane to China. A plane is huge and travels over the ocean like a whale in the sky. We celebrated Chinese New Year with Grandma. This celebration is different than, in the United States. It lasts for fifteen days, not just one night. After we arrived, Grandma surprised me with new red clothing. She said red brings good luck.

On New Year’s Eve, we went to Grandma’s house. I learned many interesting Chinese customs. One custom is to have a family dinner that includes tasty dumplings. Then we stepped outdoors to watch a big parade. At the end, a rainbow of firecrackers snapped and popped in the sky!

Later that week we watched the Chinese lion dance. I’d never seen anything like it. Each pair of dancers wore a fancy lion costume made of cloth as yellow as the Sun. The dancers leaped through the air and did amazing tricks!

We went to the Lantern Festival on the last day of Chinese New Year. The full moon hung like a balloon in the dark sky. Everyone made paper lanterns that lit up the night.

The two celebrations were different. They were the same, too. They had one thing in common. They were both exciting family celebrations to welcome the New Year!

Make Connections

How is the New Year celebration in China different from the celebration in the United States? ESSENTIAL QUESTION

Compare the New Year’s celebrations in the story to how you and your family celebrate the New Year. TEXT TO SELF

**TOEFL Junior:**

counted (count)

favorite (favorable)

parade

snapped (snap)

**TOEFL:**

amazing (amaze)

clothing

costume

customs (custom)

essential

parade

snapped (snap)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week4

Why the Sun and Moon Live in the Sky

This play is based on an African folktale that tells how the moon and sun ended up in the sky.

Characters:

Narrator

Sun

Moon, Sun’s Wife

Water

Narrator: Long ago, Sun, Moon, and Water lived together on Earth.

(Sun and Moon are eating breakfast at home.)

Sun: I will visit my good friend Water today.

Moon: That sounds enjoyable, but why doesn’t Water ever visit us? Do you feel ashamed or embarrassed to invite Water here?

Sun: No, I am proud of our house. I will invite Water today!

(Sun visits Water at the beach.)

Sun: Water, why don’t you ever visit us?

Water: Your house can’t hold me and my family.

Sun: That’s nonsense! Moon and I will enlarge our house, so there will be plenty of room for everyone!

Water: Then I will visit you.

Sun: Wonderful! Please holler loudly, so I hear you when you arrive. Now I must dash home quickly to start the work.

(Sun rushes home.)

Narrator: Sun and Moon raced to make their home larger. They added rooms and raised the roof higher. The new house was completely different and had no similarities to their old home. They felt it was a victory, or a win, for now their friend could visit.

Water: Sun and Moon, I have arrived!

Sun: Isn’t this the largest home you’ve seen?

Moon: Sun, it’s not polite to brag, so please don’t boast to our guest. Water, come inside.

Narrator: Water splashed through the door carrying colorful fish, frogs, and crabs. As the water began to rise, Sun and Moon climbed onto furniture. Then they scrambled onto the roof.

Sun: Moon, I’m not sure about the wisdom of inviting Water. Perhaps this wasn’t a smart idea!

Moon: No, Sun, it was the right thing to do but we must fly to safety!

Narrator: Sun and Moon flew to the sky, where they remain today and still shine down on Water.

Make Connections

What does this folktale explain about nature? ESSENTIAL QUESTION

How is this story different from what you know about the sun and moon? TEXT TO SELF

**TOEFL Junior:**

completely (complete)

enlarge

higher (height)

nonsense

race

**TOEFL:**

boast

brag

characters (character)

completely (complete)

embarrassed (embarrass)

essential

furniture

inviting

narrator

nonsense

raised (raise)

ashamed(shameless)

splashed (splash)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week5

“Snow Shape”

Snow is falling from the sky.

It drops on the ground.

It’s bright, bright white, just like cold milk.

It looks so soft and smooth.

I hate to ruin it with my feet,

but I have got a plan.

I stand up tall and close my eyes,

and then straight back I fall.

I slide my arms up and down.

I move my legs in and out.

I stand up to see what I have made,

A four-foot shape in the snow

----Of me!

by Dana Williams

Nature Walk

When you take a walk in the fall,

leaves are like a blanket on the ground.

They crunch under your feet

with each step you take.

When you take a walk in the fall,

the temperature begins to drop.

The air feels as cool as raindrops on your cheek.

It smells like clean cotton towels.

When you take a walk in the fall,

the outdoors will excite you.

It’s a wonderful time!

by Sarah Miller

In the Sky

Outdoors on a clear day,

look up in the sky.

What do you see there?

Look! I see a giant polar bear.

Look! I see a pale flower growing.

Look! I see a buffalo and her baby.

Wait...it’s changing.

Now I see a cowboy on his horse

Galloping, galloping across the sky.

I wonder where he’ll ride?

by Juanita Marco

Make Connections

Talk about how nature excites the poet of each poem. ESSENTIAL QUESTION

Which poem do you like the most? How does it excite you about nature? TEXT TO SELF

**TOEFL Junior:**

giant

slide

**TOEFL:**

bear

essential

smells (smell)

temperature

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week1

A Difficult Decision

My best friend Paul and I were excited to g to the park after school. The park had a new fort. The Parks Department let the kids choose what kind of equipment to build, and the fort got the most votes. After school, Mom and I met Paul and his dad at the park.

Paul and I raced to the top of the tower. “I win. I’m the champion,” I shouted. “Look, Paul! Someone left the newest GameMaster here. It’s mine now!”

Paul raised his eyebrows and looked thoughtful. “Wyatt, you cannot keep that GameMaster,” he said. “You have a responsibility to return it. It is your duty!”

I asked, “Haven’t you ever heard the saying, ‘finders keepers, losers weepers’? I have rights. I found it, so I am claiming it.”

“You can do whatever you want, Wyatt, but you know it’s wrong to keep it,” Paul said. Then he added, “Whenever there are issues like this at school, you’re the one who helps solve the problems. Now you aren’t taking your own advice.”

Then Paul added, “I volunteered my thought If you don’t want to take the help I offered, there’ nothing I can do.”

Paul was right. I couldn’t keep the game because it wasn’t mine. The person who lost it would be upset. I cleared my throat and said in my best deep voice, “I’ve determined that you’re right!”

“I’m delighted you decided to do the right thing,” said Paul.

We told my mother what happened. She walked around the park with us so we could try to find the owner of the game. Soon we saw a boy and his Mom looking for something. He looked hopeless, and he burst into tears when we asked him if the game was his. “Yes,” he wailed, “I lost my GameMaster a little while ago I should have been more careful!”

Afterward, Mom and I walked home. I was glad I returned the toy to the boy. So, I made a promise to myself to always try to do the right thing. Now that is a vow I can keep!

Make Connections

How are Paul and Wyatt good citizens? ESSENTIAL QUESTION

What is something you do to be a good citizen? TEXT TO SELF

**TOEFL Junior:**

advice

issues (issue)

race

volunteered (volunteer)

votes (vote)

**TOEFL:**

advice

champion

choose

equipment

essential

fort

issues (issue)

tower

upset

mine

offered (offer)

raised (raise)

volunteered (volunteer)

votes (vote)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week2

Soccer Friends

Kelly couldn’t wait until soccer season began. She could not be patient because she just loved racing to get the ball. She would use her imagination to picture the ball, and then she would fly toward it. Kelly practiced at home during the calm, peaceful mornings.

At the first team practice, Kelly greeted her friends. She liked to chat and interact with them. Then she saw a new girl. “That’s Selena. She’s a really fast runner,” reported Kelly’s friend Tara.

At first, Kelly held her tongue and said nothing. She was worried. She had always been the fastest runner on the team. Then she said, “I can beat her.”

When practice started, Coach Troy had everyone line up for races. Kelly was nervous and had butterflies in her stomach.

“On your mark, get set, GO!” the coach shouted. Kelly ran as fast as she could but she noticed Selena getting ahead of her. Kelly tried her best but couldn't match Selena.

Later, Kelly watched as Selena entertained some girls by bouncing the ball on her head. The girls laughed, but Kelly was not amused.

That night, Mom could tell Kelly was upset. “Can you describe what’s wrong?” she asked.

“A new girl named Selena beat me at the races. It stinks to get beaten!” said Selena.

“I know that’s disappointing for you,” Mom said. “But it also sounds like good news for your team.” Kelly thought about her Mom’s words. She cared about the team, but she liked being the fastest.

At the next practice, the team played a game. Kelly and Selena were on the same team and Selena was goalie. She quickly blocked a goal.

Then Kelly got the ball and thumped it hard toward the net. She scored the winning goal!

After practice, Selena said to Kelly, “You were really great today.”

“Thanks, so were you. I think our team can be great if we cooperate and work together.” said Kelly.

“I think you’re right about that,” said Selena.

“I’d love to keep playing,” Kelly said. “Want to come over to my house and practice?”

Make Connections

How does Kelly learn to get along with Selena on the soccer field? ESSENTIAL QUESTION

Compare Kelly’s problem to a time you have had to work to get along with others. TEXT TO SELF

**TOEFL Junior:**

coach

during (duration)

entertained (entertain)

race

**TOEFL:**

beat

blocked (block)

chat

cooperate

entertained (entertain)

essential

head

imagination(imaginary)

patient(impatient)

upset

nervous

thumped(thump)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week3

César Chávez

Who are your heroes? For many farm workers, César Chávez is a hero. He is the brave man who spent his life helping them.

**Childhood**

César Chávez was born in Arizona. His parents taught him about learning, hard work, and respect.

César worked on the family farm as a young boy. He helped care for the farm animals. His mother and grandmother taught César about caring. Many people came to their door asking for food, and his kind family always shared.

César had a strong interest in education. This desire to learn was sometimes hard on him Spanish was his first language, but he needed to learn and study English. At school, he was punished for speaking Spanish.

His mother taught César to find peaceful ways to solve problems. These lessons helped him succeed later in life. He would win struggles without fighting.

**Hard Times**

When César was ten, it did not rain for a long time. This drought caused the plants on the farm to die. Without crops to sell, César family couldn’t afford to keep the farm.

Then César’s family moved to California where there was no drought. His family traveled from farm to farm and worked the crops.

César and his family would quickly discover that migrant farm workers had difficult lives. Their challenging jobs forced them to work long hours for little money. The workers bent over all day tending the crops. The work they had to perform made their backs hurt and their fingers bleed. If workers complained, farm owners fired them.

**Changing Lives**

César knew the migrant workers were not treated fairly so he decided to take action. He told the migrant workers he had a plan.

It was time for grapes to be harvested, or picked. César told the workers to stop working. This was a called a strike. The grapes began to rot. With no grapes to sell, the landowners lost money. Finally, the owners talked to César. They promised better pay. After that, the workers began picking the crops again.

César Chávez worked for the rest of his life to improve farm workers’ lives. Would you agree that he is a hero?

Make Connections

How do César Chávez’s actions make him a hero? ESSENTIAL QUESTION

How have you ever tried to help others? TEXTTO SELF

**TOEFL Junior:**

complained (complaint)

tending (tend)

treated (treat)

**TOEFL:**

afford

bent

bleed

complained (complaint)

desire

drought

essential

harvested(harvest)

rot

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week4

The Art Project

“Look! The community center is having an art contest,” said Grace. She was holding a flyer.

Mrs. Simon read the flyer aloud. Everyone agreed they would like to enter the art contest. Mrs. Simon said, “Our classroom supply of art materials is low because it’s the end of the year. I’ll check with Mrs. Rice to see what she has.”

Mrs. Rice, the art teacher, didn’t have any art materials. “I won’t be getting a supply until next year,” she said. The whole class was disappointed. “How can we enter the art contest without art materials?” asked Grace.

“Maybe we can raise some money. We could have a bake sale,” suggested Hal.

“I don’t think there’s time, Mrs. Simon said.

“Let’s use the paper in the recycling bin,” Pablo said. Pablo did not often raise his hand. He rarely spoke up, so everyone was surprised when he offered an idea.

Hal said, “I’m curious about your idea. I want to learn why you would use old paper.”

“So we can save Earth’s resources,” replied Pablo. “When we use recycled paper, we use natural materials and save trees.”

“We can also use this old string and these wire hangers,” added Grace.

Now the class had to decide what to do with the materials. Pablo had another idea. “We can fold the paper into cranes. Then we can attach the cranes to a frame to make a mobile.”

Mrs. Simon taught the children how to fold the paper into cranes. Then everyone helped attach the cranes to the mobile.

On the day of the art contest, the paper crane mobile hung in the enormous community center room. The huge space was crowded with art projects. From far off, the class spotted their project. The crane mobile swayed gently as people walked past. From a distance, the paper cranes appeared to be softly flying.

The judges checked each art project. They looked closely at the crane mobile.

The paper crane mobile won the prize for the most creative use of materials. As the class proudly accepted their prize, they could not stop grinning. Grace exclaimed, “We made our art project, and we saved the Earth at the same time!”

Make Connections

What do the children do at school to help protect the Earth? ESSENTIAL QUESTION

Tell about a way you can help protect Earth’s resources at school. TEXT TO SELF

**TOEFL Junior:**

attach

enter (entry)

exclaimed (exclaim)

spotted (spot)

wire (wireless)

**TOEFL:**

attach

community

appeared(appear)

check

curious

enormous

entered (entry)

exclaimed (exclaim)

mobile(immobile)

natural

offered (offer)

raise

saved (save)

spotted (spot)

suggested (suggest)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week5

Visiting the Past

On the Fourth of July, skies across the United States light up. It’s Independence Day! The holiday celebrates the Declaration of Independence.

In 1776, this statement was written to tell the King of England that the colonies were free from his rule. The colonies would be united to form a new country together.

Janet Chang, 8, recently visited Philadelphia with her family. Philadelphia was the first capital of the United States, The Changs went there to learn about their country’s history or past.

**Busy Building**

First, they went to Independence Hall. “That’s where the Declaration of Independence was signed,” Janet exclaimed She was excited to be there.

Ten years after the Declaration of Independence, the Constitution was written in Independence Hall. The writers of the Constitution created new rules for the country. Rules are important. They help to keep order in a country and give people rights. One new rule was that people could state their opinion.

**Ringing for Freedom**

The Changs later visited the Liberty Bell. It is said that the famous bell rang I on July 8,1776. That’s when the first public reading of the Declaration of Independence took place. The bell also chimed to announce important events, such as when a President was elected.

TIME FOR KIDS

Visit Philadelphia!

|  |  |
| --- | --- |
| Famous Place | Why It is Cool |
| The National Constitution Center | It explains the rules that were created for our nation. One area tells of the right to say what you want and the right to vote. |
| Independence Hall | This is where the Declaration of Independence and the Constitution were written. You can see the chair that George Washington sat in as he signed the Constitution. |
| Betsy Ross Home | It is said that Betsy Ross made the first American flag. You can tour her home to see how she lived and worked. |

**Memorable Moments**

Finally, Janet and her family explored Franklin Court. This is where Benjamin Franklin lived and worked. Franklin was one of the writers of the Declaration of Independence. He also helped frame the Constitution.

To remember their visit, the Changs mailed a postcard from Franklin’s post office. “I’ll never forget this day!” Janet said.

Make Connections

What is one rule of our country? Why are rules important? ESSENTIAL QUESTION

How is this rule the same or different from your rules at school? TEXT TO SELF

**TOEFL Junior:**

exclaimed (exclaim)

liberty

vote

**TOEFL:**

announce

constitution

court

essential

exclaimed (exclaim)

explored(explore)

national

recently

vote

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week1

Why Fir Tree Keeps His Leaves

Long ago, in ancient times, Mother Nature gave each tree a different purpose. However, she did not share her reasons with the trees.

Fir Tree had three friends ---- Maple, Oak, and Elm. During the first summer, they saw Bird and Squirrel play in Farmer’s corn and tomato crops. The breeze blew and rustled their leaves. The shining sun warmed them.

Then the first fall arrived. Farmer harvested what he had grown. Maple, Oak, and Elm’s leaves turned beautiful shades of orange, red, and yellow. The leaves shone as golden as the Sun. Fir Tree;s leaves stayed green.

Fir Tree complained to Mother Nature, “I don’t like my leaves. I want them to change colors like my friends’ leaves.”

“Be patient,” Mother Nature replied. “You will learn your purpose.”

So Fir Tree waited. The temperature dropped even more. Bird flew south, and Squirrel was nowhere around. Maple, Oak, and Elm lost their leaves, but Fir Tree’s green leaves remained.

Soon snow blanketed the ground.

Again, Fir Tree protested to Mother Nature. “Why am I different? Why don’t I have stages and change like my friends? I seem to be stuck in one period of life!”

“Be patient,” Mother Nature replied. “Soon you will develop an understanding of your purpose.”

Just then, Squirrel appeared on the edge of the forest. She was cold. When she went inside the forest, she saw Maple. She asked if she could build a warm nest in his branches.

Maple said he didn’t have any leaves. She asked Oak and then Elm. Both said the same thing as Maple. She was still bitterly cold

Squirrel approached Fir Tree. “Excuse me,” she said. “May I build a nest in your branches?”

“Yes, that would be nice,” said Fir Tree. Squirrel ran up Fir Tree’s branches, and she made her nest. Soon, she was warm, comfortable, and asleep.

Fir Tree finally understood that his green leaves provided a warm shelter for animals in the winter. From that moment on, Fir Tree was happy to be different. Still today, he remains proud of his evergreen leaves.

Make Connections

How did Fir Tree develop differently from his friends? ESSENTIAL QUESTION

When have you wanted to be like your friends? TEXT TO SELF

**TOEFL Junior:**

approached (approach)

complained (complaint)

during (duration)

provided (provide)

**TOEFL:**

appeared(appear)

breeze

complained (complaint)

develop

edge

excuse

harvested(harvest)

patient

nature

provided (provide)

shades(shade)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week2

Pedal Power

**What Is Energy?**

Energy is the ability to do work. Solar energy comes from the Sun. It’s a silent source of energy, because it makes no sound. There is also energy that comes from wind and water.

Did you know that energy can come from people, too? When you pedal a bike, you produce energy. You use your legs to push the pedals. Your energy is transferred to the bike. This shift of power or energy makes the bike move.

Now imagine riding your bike to create enough power to run a computer. Some students at one school did just that! They hopped on bikes connected to generators and pedaled in place. Soon they were producing electricity. This energy is needed to run their laptop computers.

**Bicycle-Powered Energy**

Here’s how bicycle-powered energy works. When a student pedals the bike, the rear wheel spins. The wheel spins the generator. The generator produces electricity.

As long as a student pedals the bicycle, electricity flows, or runs, through the generator. The electricity can be used right away. This energy can also be stored in a battery. It can be used later. Teachers can haul, or carry, laptop computers to the battery and plug them in for power.

**Using Bicycle-Powered Energy**

People also exercise on bicycles and produce power in gyms. People create watts as they pedal. A watt is a unit for measuring power. Small devices, such as small televisions and fans, often use less than 100 watts per hour. These things can be run by bicycle-powered electricity.

It would be a mistake to use pedal power to run a refrigerator, though. This large appliance often uses more than 700 watts per hour. The electricity for these machines comes from power lines overhead or underground.

Pedal power is popping up in schools, gyms, and homes. What a fun way to provide electricity!

Make Connections

How can people use the electricity they produce from riding bikes? ESSENTIAL QUESTION

Tell about how you might use bike-powered electricity. TEXT TO SELF

**TOEFL Junior:**

devices (device)

generators/ generator (generate)

provide

**TOEFL:**

devices (device)

generators/ generator (generate)

haul

imagine(imaginary)

provide

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week3

Dive Teams

Imagine exploring the underwater world of the ocean. Perhaps you want to see how sea animals live, or you may hope to search for sunken ships. That is just what Gloria did!

Gloria has always lived close to the sea in California. She swam and surfed at an early age. She became interested in the ocean. So Gloria became an expert diver. She decided to join a dive team to find sunken ships. What would her job be?

Each job on a dive team is important. One serious job is using machines the dive team needs. Another job is to repair, or fix, these devices when they don’t work. Gloria is an experienced photographer, so she decides to photograph what the team discovers underwater.

Teamwork is important for a dive team. Team members depend on one another. They divide up the tasks and each person helps to get the job done.

Gloria’s team learns about a ship that sank over 100 years ago. No one has ever found it! They decide to make a scientific study of it. The team reads information and studies a map where they think the ship sank. They are excited about their exploration.

The captain, another team member, takes them by boat to their map location. He stays on the boat where he can communicate with the divers.

Before the team dives, they prepare for their special jobs. To get ready, Gloria puts on her diving suit and gear and makes sure her camera is ready to take photographs.

Now the divers jump into the water. As they swim deeper, it gets darker. A team member turns on a flashlight. This helps the divers see where they are going.

Finally, one team member spots the ship! He uses an aquatic microphone to talk to the team. Gloria takes pictures as teammates measure the ship. Another teammate watches for sharks and other dangers.

After an hour of exploring, the person with the flashlight leads the way back to the boat. The team now has important results from their discovery to share. Gloria thinks, “I will always remember this dive!”

Make Connections

Why is teamwork important for exploring shipwrecks? ESSENTIAL QUESTION

Would you enjoy being part of team that explores shipwrecks? Explain your answer. TEXT TO SELF

**TOEFL Junior:**

devices (device)

dives (dive)

divide

gear

spots (spot)

**TOEFL:**

communicate

dangers (danger)

devices (device)

divide

explores(explore)

fix(fixed)

gear

imagine(imaginary)

leads (lead)

serious

spots (spot)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week4

The Life of a Dollar Bill

**The Dollar Bill Is Printed**

One day, a dollar bill is printed at the United States Bureau of Engraving and Printing. The bill is printed on a machine that was invented, or created, to save time. It prints many bills at a time.

Let’s follow the dollar bill. It gets sent to a big bank and then a local bank. A family visits this neighborhood bank to get money. The dollar bill goes to a boy for his allowance.

The boy brings the dollar bill to the bookstore. He checks prices to see how much the books cost. Then he decides what he can purchase. He finds a book to buy, but is it worth the price? He’s not sure. The boy reads the back of the book and thinks about the price. The boy decides the book is a good value, so he exchanges his money for the book.

**The Dollar Bill Travels**

Later, a girl buys a birthday card at the bookstore. She gets the dollar bill as change. She takes the dollar bill home and saves it in her piggy bank.

When the girl wants to see a movie, she takes money out of her piggy bank, including the dollar bill. She uses it to pay for the ticket. Then the dollar bill travels on.

Almost two years pass and now a man gets the dollar bill. It is worn out and torn. The man is not sure if it’s usable. What happens to the ripped bill? The man takes it to his local bank and trades it in for a new dollar bill.

**The Dollar Bill Is Replaced**

The old dollar bill is returned to the big bank where workers decide that it can’t be used again. They destroy the bill by shredding it. They cut it into tiny pieces.

Back at the U.S. Bureau of Engraving and Printing, a new dollar bill is printed to replace the old one. Workers use a record to keep track of how many bills are printed and destroyed. They make sure there are enough bills in the system so people can buy and sell things.

The next time you hold a one-dollar bill, think of where it has been and where it is going. Each dollar bill has a busy, useful life.

Make Connections

Why is a dollar bill important? ESSENTIAL QUESTION

What can you do with a one-dollar bill? TEXT TO SELF

**TOEFL Junior:**

bureau

value

**TOEFL:**

bill

checks (check)

exchanges (exchange)

purchase

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week5

“A Box of Crayons”

A box of crayons is the sun

on a dreary, rainy day.

You can draw a hot air balloon

and travel far far away.

You can draw a beach

and play in the silky sand.

You can draw a drum

and play in a marching band.

With crayons you can always create

something exciting, something great!

----by Isaiah Nowels

Essential Question

Where can your imagination take you?

Read how poems share ideas and creativity.

What Story Is This?

None of us are us today,

We’re putting on a play.

“Knock, knock, knock! Someone’s there!”

That’s the wolf, my friend Claire.

“Not by the hair of my chinny-chin chin!”

Julie, a little pig, says with a grin.

Joseph and Pat are pigs as well.

They run to Claire’s house and ring the bell.

Do you remember this story’s name?

If so, you’ve won this guessing game!

----by Trevor Reynolds

The Ticket

I have a special ticket

That takes me anywhere,

To oceans deep, the dazzling stars,

A mighty lion’s lair.

I’ve been to a volcano,

Which is like a boiling pot,

I even rode a camel,

Through the desert, burning hot.

I’ve shivered in the North Pole,

At 43 below,

And built myself a cozy igloo,

Out of blocks of snow.

I’ve met a great inventor,

And helped him to create,

A baseball playing robot,

That slides into home plate.

My journeys take just seconds,

I simply close my eyes,

And I’m a rocket sleek and silver,

Speeding through the skies.

What’s that? You’d like to join me?

Here’s all you have to do:

Use your imagination,

And you’ll soon go places, too!

----by Constance Keremes

Make Connections

Where does each poet go in his or her imagination? ESSENTIAL QUESTION

Which poem reminds you of somewhere you have been in your own imagination? TEXT TO SELF

**TOEFL Junior:**

essential

slides (slide)

**TOEFL:**

blocks (block)

burning

cozy

dazzling

desert

essential

imagination(imaginary)

mighty

reminds (remind)

speeding (speed)

volcano

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

**Wonders G3**

Unit 1 Week1

**BRUNO’S NEW HOME**

Bruno shivered. A frosty wind blew through the forest. Bright red and orange leaves danced around the trees. His paws felt like blocks of ice. It was almost winter. Bruno needed a warm, safe place to hibernate, and he needed it now.

Bruno moved slowly through the woods. He grumbled and growled to himself. Finding a new place to sleep was harder than he thought.

Bruno climbed up a small hill. He hiked around a pond and walked on a path. No place was right. Finally he made an exciting **discovery**.

Bruno spotted a cave in the side of a rocky hill. It was perfect except for one thing. He couldn’t fit through the opening. It was blocked with a pile of dirt and tangled roots.

Bruno sat down to think. “I’ll just dig out some of this dirt and make the entrance bigger,” he thought. “Then I can finally get to sleep.”

Bruno dug and dug with his huge paws, but the dirt was packed down hard. It took a lot of hard work and **effort**. He pulled and pulled at the tree roots.

The roots were strong and too tough to rip out. Bruno stopped to rest. His paws **ached**. They were red and sore. Suddenly he heard a loud sound. “Crack!”

Bruno turned quickly and saw a small squirrel eating a nut. He stopped eating and smiled at Bruno.

“You look like you need help,” said the squirrel.

Bruno sighed. “I have been trying to fit into this cave, but it’s hopeless. I’ve been digging and digging, but I haven’t **improved** the opening at all.”

“I’m Jack, and I can help,” said the squirrel.

“But you are too small,” said Bruno.

Jack told Bruno to sit down and rest. Bruno sat and yawned as Jack scampered away. A few minutes later, he came back.

“What you need is a book,” said Jack. “Reading can help you become **educated**. Books are filled with knowledge.” He handed Bruno a thick red book.

Bruno moved to a bright, sunny spot. He put on his glasses and tried to **concentrate** on the story. He paid careful attention to the plot.

The story was about a lion and a mouse. The lion thought the mouse was too small to help him. One day the lion got caught in a net. The mouse chewed the net’s ropes and helped the lion escape.

“Well, the lion in this story learned an important lesson,” said Bruno. I think I did, too.”

The story **inspired** Bruno. The mouse had sharp teeth and so did Jack. Jack could help.

The new friends made a fine team. Jack chewed through the thick roots and Bruno dug out the dirt. They worked together all afternoon. Finally, Bruno could fit through the opening.

“Are you **satisfied** and happy with your cozy new home?” asked Jack.

“I sure am!” said Bruno. “And I learned something, too. Good friends come in small packages.”

**Make Connections**

Talk about the story of the Lion and the Mouse. How did it help Bruno solve his problem? ESSENTIAL QUESTION

Discuss how you and your friends help one another. TEXT TO SELF

**TOEFL Junior:**

knowledge

spotted (spot)

**TOEFL:**

blocks (block)

cozy

essential

fit

grumbled (grumble)

hiked(hike)

knowledge

perfect

plot

sharp(sharpen)

sighed (sigh)

spotted (spot)

tangled (tangle)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week2

**The Dream Catcher**

Peter walked home from school. Salty tears ran down his cheeks, and his stomach hurt. He didn’t know what to do. Grandmother was waiting for him on the front porch.

“What’s wrong, Biyen?” said Peter’s grandmother. Biyen was the Ojibwe name for Peter. He called her Nokomis, which means grandmother.

Peter looked up. “I have to give a presentation where I talk about a family **tradition**. I know we have lots of beliefs and customs. Can you **remind** me of one?”

Nokomis smiled and nodded her head.

“Come with me,” she said.

Peter followed Nokomis. She went to a closet and stretched to reach the top shelf. She pulled out a small box and blew away the dust. She handed it to Peter.

“Open it,” she said.

Peter opened the box. He spotted a wooden hoop inside. It was in the shape of a circle. String was woven and twisted around the hoop. It looked like a spider web. A black bead sat near the center. Feathers hung from the bottom.

Peter wiped away his tears and smiled.

“This is a dream catcher,” said Nokomis, “Our people have made these for many years. Circles are **symbols** of unity and strength. Let’s hang it over your bed tonight. It will catch your bad dreams in the web, and your good dreams will fall through the center. Maybe it will give you **courage** to do your presentation.”

“Can I take this one to school?”asked Peter.

“NO, Biyen,” said Nokomis. “This dream catcher is **precious**. I got it when I was your age, and it means a lot to me.”

Peter felt **disappointment** because he wanted to share the dream catcher with his class.

“We could make you one,” said Nokomis.

“I’d like that!” cried Peter.

Nokomis and peter worked together and made a dream catcher. That night, as he gazed and looked at the dream catcher over his bed, he made a plan.

The next morning he told Nokomis his plan. “I’m going to show my class how to make a dream catcher.” he said.

“That’s a great idea!” said Nokomis. “Let’s **celebrate** after your presentation. I will bake corn cookies and we will have a traditional Ojibwe party.”

Peter shared his dream catcher with his classmates and showed them how to make their own. Peter didn’t feel nervous or scared at all. He felt pride in his culture. He felt **pride** in himself, too.

**Make Connections**

What tradition did peter learn about? How did it help him? ESSENTIAL QUESTION

What traditions do you take part in? TEXT TO SELF

**TOEFL Junior:**

gazed (gaze)

spotted (spot)

twisted (twist)

**TOEFL:**

customs (custom)

gazed (gaze)

means (mean)

nervous

nodded (nod)

precious

reminded (remind)

scared (scare)

spotted (spot)

symbols (symbol)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week3

**Room to Grow**

**Spring in the city**

My name is Kiku Sato. Last spring, my family and I moved from the country to the big city.

Our new home in Portland had no yard. There wasn’t even a tiny plot of land. So Mama made an indoor garden. First she and papa planted seeds in pots. Then they hung them from hooks. Next they crammed plants onto shelves. Green vines **tumbled** over desks. Soon our house had plants everywhere.

At first I was **scared** to start school. I was afraid no one would be my friend. But I soon met a **classmate**. Jill Hernandez and I were **practicing** reading aloud one day. She helped me say her last name, and I helped her **pronounce** mine. The next day we were best friends. Jill spent lots of time at my house.

**An idea for a Garden**

One afternoon, Jill and her mother came to visit Mama and papa and me. First they saw our beautify potted plants. Jill’s mother said, “Jill **admires** your indoor garden. She has told me so much about it.”

We all sat down while Mama served tea. First she put green tea into the tea bowl. Then she added hot water and stirred. She handed the bowl to Jill’s mother and bowed.

“My mother taught me how to make tea,” said Mama. “She also taught me how to plant a traditional Japanese garden. I learned to make the most of a small, compact space.”

All of a sudden, Jill’s mother smiled. “Can you help us with a project?” she asked. “Our **community** wants to plant a garden. Our plot is very small. There is so much we want to grow.”

Papa looked at Mama, and they both bowed.

“Yes,” they said.

**A Garden Grows**

First we had a meeting with the community. Everyone agreed to **contribute**. Some people brought seeds, tools, and dirt. Then the next day we met and started our garden.

Papa built long, open boxes. Next, we filled them with dirt. The tallest box went close to the back wall. The boxes got shorter and shorter. The shortest box was in the front.” All the plants will get sunlight without making shade for the others,” Mama said.

Then, we used round, flat stones to make a rock path. Papa said that in Japan, stones are an important part of a garden. Finally, we planted the seeds.

Jill and I worked in the garden all summer. Our community grew many different vegetables. At the end of the summer, we picked enough to have a cookout. Mama brought a big pot of miso and vegetable stew. Everyone thanked mama and Papa for their help. They brought a bit of Japan to Portland. I was so proud.

**Make Connections**

What did Kiku’s family do to help their new community? What parts of their culture did they share? ESSENTIAL QUESTION

How can you and your family contribute to your community? TEXT TO SELF

**TOEFL Junior:**

hooks (hook)

community

**TOEFL:**

admires (admire)

bowed (bow)

community

compact

crammed (cram)

land

last

long

plot

scared (scare)

shade

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 4

**Mary Anderson’s GREAT INVENTION**

You might think that a ride in a bus or car is the same today as it was long ago. That isn’t true. The first cars were not as fast. they were noisy. Cars didn’t even have windshield wipers!

When it rained, drivers rubbed their windshields with an onion. The oil from the onion would repel, or keep off, rain and sleet. It wasn’t the best **solution**, but there were no better **substitutes**. Nothing else worked. Then a woman named Mary Anderson solved the problem.

**It Started with Snow**

Mary Anderson grew up in Alabama. In the winter of 1902, she went to New York City. It was a cold and windy day. The sky was a gray curtain. Snow was a white blanket on the ground. Mary was cold and wet. Because she wanted to warm up and get dry, she rode a streetcar.

Back then, some streetcar windshields had two parts. They opened with a push. From her seat, Mary watched snow and ice build up on the windshield. The streetcar driver could not see. So, he pushed open the windshield. This helped him to see better. As a result, snow and ice blew in his face. Soon his nose and ears were ice cubes.

Other cars kept stopping too. Sometimes the drivers hopped out. They wiped off their windshields. Then they got back in and drove. As a result, traffic moved slowly.

**The Next step**

Mary thought about this problem. How could drivers clean their windshields without stopping? Could they do it without opening their windshield?

Back home in Alabama, Mary sketched her idea. Then she added notes. She wanted to **examine** her solution to make sure that it worked. Next, Mary did her own **investigation**. She looked for facts about what drivers needed. She invented a windshield wiper that a driver could use from inside the car. Then she worked out a **design**, or plan. On paper, Mary’s invention looked **simple**. She hoped drivers would find it easy to use.

**Mary Anderson’s Windshield Wiper**

Mary had a model built. It was made of **quality** wood, rubber, and metal. Soon the model was ready to test. It was fitted on a windshield. The driver moved a handle inside the car. The handle caused a blade to move back and forth across the glass. It worked! Mary’s idea was a gem! She felt **encouraged** and was sure it would sell.

**Solving the Problem**

Mary’s windshield wipers solved a problem. But it took many years before people used them. That’s because most people did not own cars.

By 1913, more people bought and drove cars. Those cars had windshields. Finally windshield wipers began to sell. Driving became safer and easier because of Mary Anderson’s idea.

**Safer to Drive**

Cars from long ago were different from cars we ride in today. Here are some more inventions that helped make driving safer.

·The first seat belts were used in 1885.

·Cars stopped at the first stop sign in 1915.

·Cars first used turn signals in 1938.

**Make Connections**

Talk about how Mary Anderson’s solution to a problem led to a new idea. ESSENTIAL QUESTION

What inventions can you think of that have made your life better? TEXT TO SELF

**TOEFL Junior:**

drive/ driving/ drove/ drivers (driver)

simple (simplicity)

substitutes (substitute)

**TOEFL:**

encouraged (encourage)

fitted(fit)

forth

gem

handle

quality

repel

windshield(shield)

sketched (sketch)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week5

**A Natural Beauty**

It is a famous **landmark** in the United States, and it’s huge! It is one mile deep and ten miles wide. It was **carved** out of rock by the Colorado River. It stretches across parts of four states. What is it? It’s the **Grand** Canyon!

**Exploring the Canyon**

Many tourists visit the Grand Canyon. In fact, almost five million people take a trip to this **national** treasure each year. People come from around the world to hike the dusty trails. They take boat rides down the Colorado River. They gaze across miles of **massive** red and brown cliffs.

Nature lovers visit the Grand Canyon, too. They come to look for animals. They peek at the hundreds of different kinds of plants. They may spot eagles and see mountain lions. They may spy snakes and spiders, and some may even see bats. Some visitors also come to learn about the canyon’s history.

**History of the Canyon**

Explorers from Europe first saw the Grand Canyon in 1540. Then in 1857, American explorers discovered it. They found groups of Native Americans living there. One of these groups was the Ancient Pueblo people.

The Ancient Pueblo people lived in the canyon for almost one thousand years. They were farmers and hunters. Scientists have found **traces**, or parts, of their old homes still standing.

Scientists have also found very old rocks in the Grand Canyon. These rocks are some of the oldest in the world. They are clues to how the canyon was formed. Some scientists look for **clues** about the people who lived there. They have found tools and pieces of pottery.

It’s a Landmark

President Theodore Roosevelt visited the Grand Canyon in 1903. He saw how beautiful it was. He said it was a special place. As a result, he made it a national **monument**. Then in 1919, the Grand Canyon was declared a national park. That means the land is protected. No one can build homes on it. The Grand Canyon is a place all Americans can enjoy.

**Protect the Canyon**

It is important for people to take care of national landmarks. We can do our part by following the rules when we visit. Animals and wildlife are safe there and should not be touched. Rivers must be kept clean.

There is still a lot to learn about this beautiful landmark. It is important that we protect it.

**Make Connections**

How does the Grand Canyon teach us about America’s story? ESSENTIAL QUESTION

What do you find most interesting about the Grand Canyon’s history? Why? TEXT TO SELF

**TOEFL Junior:**

cliffs (cliff)

clues (clue)

gaze

grand

massive

spot

**TOEFL:**

explorer(explore)

gaze

hike

traces (trace)

located (locate)

massive

nature (natural)

spot

standing (stand)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week1

**Anansi Learns a Lesson**

Anansi the Spider lived alone and made his lunch the same time each day. One afternoon, Turtle stopped by.

“I hate to get in the way and **interfere** with your meal, but those bananas look wonderful,” said Turtle. “I am so hungry.”

Anansi knew he should share with others. It was a big part of his culture. But he was hungry and didn’t want to share. He decided to play a trick on Turtle.

“Please, help yourself,” Anansi said with a sly grin.

Turtle reached for the food. “Shouldn’t you wash your hands?” asked Anansi.

“Oh, yes!” Turtle said. When Turtle returned, Anansi had eaten half of the bananas.

“I didn’t want the bananas to spoil,” said Anansi.

Turtle got closer and made another **attempt** to eat. Anansi stopped him again.

“Turtle, please go wash your hands,” he said.

Turtle knew his hands were clean, but Anansi still thought they were filthy. However, Turtle was too shy and **timid** to say no. When he returned Anansi had eaten the rest of the fruit.

“Ha, ha, I tricked you, Turtle,” said Anansi. “You didn’t get any bananas!”

Turtle was angry at Anansi. He decided to teach that nasty spider a lesson. “Please come to my house at the bottom of the lake for dinner tomorrow,” said Turtle.

Anansi quickly said yes. He loved free food.

Turtle couldn’t trick Anansi alone, so he decided to ask Fish to get **involved** and help make a plan.

Turtle found Fish at the lake. “Fish, I need your help,” he said. “With your **cooperation**, we can trick Anansi.” Anansi had tricked Fish many times so Fish was happy to help. Together the two friends **created** a clever plan.

The next day, Anansi went to the lake. Fish met him at the water’s edge. “Come Anansi,” said Fish. “We will swim to Turtle’s house together.” Anansi jumped into the water. He was a clumsy and **awkward** swimmer. He was also very light.

“How will I ever get down to Turtle’s house?” he cried.

Fish knew what to say. “Grab some heavy stones. Then you will sink, not float.”

Anansi picked up two big stones, jumped into the lake, and sank down, down, down. Fish swam at his side. At Turtle’s house, Anansi saw a wonderful feast of berries.

“Welcome, Anansi,” said Turtle. “Drop those stones and help yourself.”

As soon as Anansi dropped the stones, he rocketed to the surface of the lake. Anansi sputtered **furiously**. “Fish and Turtle tricked me,” he cried angrily.

Back at the bottom of the lake, Turtle and fish laughed and laughed.

“We worked together and taught Anansi a lesson,” said Turtle.

“What a good way to solve a problem,” said Fish.

“Let’s eat!”

**Make Connections**

Tell how Turtle and fish worked together to trick Anansi. ESSENTIAL QUESTION

Think of a time when you and a friend solved a problem. Why was it easier to work together? TEXT TO SELF

**TOEFL Junior:**

awkward

interfere

**TOEFL:**

alone

awkward

clumsy

cooperation

edge

filthy

furiously (furious)

hungry(hunger)

interfere

shy

sly

spoil

timid

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week2

**SAILING TO AMERICA**

Nora woke early. She hadn’t slept much. It was March, 1895. Da was leaving for America today. Uncle Ed had **immigrated** there last year and found work right away. He had asked Da to join him. It was Mama and Da’s dream to one day live in America.

Nora lit a lamp for light and sat down at the table. Her brother, Danny, joined her.

“I feel like crying,” he **whispered** softly.

“I know,” Nora answered. “So do I, but this is Da and Mama’s dream. Da will find work and send for us. Look at the **photographs** that Uncle Sean sent. Doesn’t America look grand?”

“I don’t want to ever leave Ireland,” Danny said.

“We won’t have any friends in America. We’ll be far away from Grandda, Paddy and Colleen.”

“Maybe you’ll be glad it isn’t Ireland,” Nora said. “There will be enough food to eat. Mama and Da can relax and not worry so much. We’ll all have a better life. America will be the land of our dreams.”

Then Da carried a bag into the room. “Cheer up, my little loves! Why, in no time at all, you’ll be joining me.”

A year later, Da had saved enough money to send for his family. Mama, Danny, and Nora packed what little they had. They got on a crowded steamship and began their voyage.

The trip across the Atlantic Ocean was rough. The air inside the steamship smelled like a dirty sock. The ship tossed up and down for days. The waves were as big as mountains. Many passengers became seasick, but Nora and Danny felt fine.

Every day Nora daydreamed and reread Da’s letters. She thought of the buildings and streetcars he wrote about. In her dreams, she could picture Da on a crowded street. He had a big smile on his face.

One morning, Nora awoke. A **moment** later, she realized something was different. The ocean was as smooth as glass.

A few hours later, Nora, Danny, and Mama shivered together on the ship’s deck. Snowflakes drifted through the air. Another traveler noticed and gave them a blanket. It was as thin as a rag, but nothing could have been more **valuable** to them.

Suddenly, someone shouted, “There’s Lady Liberty!” As the ship passed the large statue, the crowd cheered. Someone shouted, “At last, we’ve **arrived**! We are in America.” Soon, everyone was singing and dancing.

A ferry took the travelers to Ellis island. In the main hall, doctors **inspected** the family. They looked for signs of illness. Mama had to answer many questions. Nora knew that people didn’t get an **opportunity**, or another chance, to take these tests twice. Nora looked at Danny then at Mama. They had to pass.

After a few hours, the family learned they could stay in America. As they filed off the ferry, Nora saw Uncle Sean’s dark hair. Then she saw Da. His hands waved wildly. He had a big smile on his face. Dreams do come true, Nora thought as she waved back.

**Make Connections**

Why did Nora and her family immigrate to America? How would the move make their lives better? ESSENTIAL QUESTION

Has anyone in your family ever moved to a new place? How did they feel? TEXT TO SELF

**TOEFL Junior:**

drifted (drift)

grand

liberty

opportunity

valuable

**TOEFL:**

immigrated(immigrate)

inspected (inspect)

opportunity

realized (realize)

relax

rough

saved (save)

smelled (smell)

statue

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week3

**Vote for the Class Pet**

Have you ever voted? Maybe you voted to choose a class pet. Maybe your family voted on which movie to see. If you have ever voted, then you know how good it feels. Voting is important. It tells people what you think.

Many years ago, the leaders of our country wanted to know what people thought, too. They wrote a plan for our **government**. It is called the Constitution. It gives men and women in the United States the right to vote.

Each year, people who are eighteen years and older pick new leaders. They also **vote** on new laws. Voting gives Americans the **power** to choose.

**Teaching Kids to Vote**

Did you know that only about six out of every ten Americans vote? That’s sad. Some people think that voting is too hard. They are unsure where to go to vote. They think it takes too much time. Now, a group called Kids Voting USA is trying to **convince** everyone to vote.

Kids Voting USA teaches kids that voting is important. The group gives teachers lessons to use in their classrooms. First, kids read stories and do fun activities about government. They also learn how to choose and **elect** a good leader.

Next, kids talk with their families. They reread stories about **candidates**. These are the people who want to be chosen as leaders. Families discuss their ideas and make **decisions**. That way, when it’s time to vote, kids know who they want to vote for.

On **election** day, kids get to vote just like adults. They use ballots like the ones in real elections. A ballot is a special form with the names of candidates on it. Kids mark their choices on the ballot. Then they put the ballot into a special box. Finally, all the votes are counted and recounted. The winners are **announced**, and everyone knows who won.

**Vote Now**

Voting helps kids learn how to be **independent** and think for themselves. It also gives them the power to share how they feel. Kids Voting USA wants kids to vote now. There’s a good reason. They **estimate** that when these kids grow up, more of them will vote.

In about ten years, kids your age will be old enough to vote. You will have the power to help elect great leaders and make new laws. Isn’t that exciting?

**Make Connections**

Talk about voting. How does voting give people the power to choose? ESSENTIAL QUESTION

Tell about a time when you voted. How did it make you feel? TEXT TO SELF

**TOEFL Junior:**

counted/ recounted (count)

estimate

favorite (favorable)

vote/votes/voted (vote)

**TOEFL:**

adult

announced(announce)

ballots (ballot)

candidates (candidate)

choices (choice)

constitution

independent (dependent)

election

estimate

government (govern)

leaders (leader)

reason

vote

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week4

**Kids to the Rescue!**

What a mess! There was dark, gooey oil everywhere. It slid across the water. It coated rocks and sand. It made swimming hard for sharks and dolphins. The oil spill in the Gulf of Mexico was making animals sick and helpless.

Two kids from a small town in Georgia watched the news. They saw pictures of sea turtles coated with oil. They watched animals struggle to move. As a result, they decided it was time to do something. The animals in the gulf needed two super heroes to help them!

**Olivia and Carter to the Rescue!**

Meet Olivia and Carter Ries. They started a group that works to save animals. Olivia was seven years old, and Carter, her brother, was eight-and-a-half. They named their group One More Generation. They want animals to be around for kids in the future.

Olivia and Carter believe everyone can make a difference. They are sending an important message. Their message is that everyone can help animals.

Olivia and Carter watched oil spread for miles across the gulf. More and more animals were getting sick. The Kemp’s ridley turtle was one of them. There are only a few thousand left in the world. They are endangered, and their **population** is getting smaller and smaller. The oil **threatened** to ruin their homes and their habitat.

**Oil Spoils Everything**

Olivia and Carter learned that the female turtles were swimming across the gulf to Mexico. They were going to lay eggs on the beaches there. But the thick oil destroyed the **resources** the turtles need to live. The harmful oil covered the sand. It made it hard for them to swim.

Sea turtles **survive** by eating seaweed, jellyfish, and small sea animals. The oil spill spoiled their food, too. Without food the turtles die.

**Saving the Sea Turtles**

Olivia and Carter **recognized** how big the problem was. The turtles needed help. First they made a thoughtful plan. Then they called a rescue group in New Orleans. They found out that the workers needed useful cleaning supplies and wipes. Next, the kids asked friends, **relatives**, and people in their town to help. They told them how the donations would help remove oil from the turtles.

Olivia and Carter collected supplies for four months. They rode with their parents to New Orleans. They carried the supplies with them. Then the kids watched **caretakers** clean hundreds of sea turtles. With the help of many people, the turtles were soon spotless. Olivia and Carter’s plan worked. It was a huge **success**!

**Keeping Busy**

Olivia and Carter work with many other groups to help animals all over the world. They give talks at museums and schools. They ask community leaders to support laws that help animals. They help rescue animals in danger.

Olivia and carter are truly super heroes to endangered animals. With their help, many animals will survive for one more generation.

**Ways You Can Help Animals!**

·Protect animal nests.

·Pick up trash at parks and wild places.

·Keep water clean.

·Stop using plastic bags.

**Make connections**

Describe the steps that Olivia and Carter took to help the Kemp’s ridley sea turtles. ESSENTIAL QUESTION

What can you and your friends do to help animals? TEXT TO SELF

**TOEFL Junior:**

generation

remove (removal)

slid (slide)

spill

spotless (spot)

**TOEFL:**

community

covered (cover)

danger

dolphins (dolphin)

endangered (endanger)

healthy(heal)

helpless

trash

jellyfish

leaders (leader)

recognized (recognize)

remove

rescue

saving (save)

sick

spoils/ spoiled (spoil)

spotless (spot)

survive

threatened(threaten)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week5

**Empanada Day**

One bite of Abuelita’s empanadas

And my mouth purrs like a cat.

“Teach me,” I beg and **bounce** on my feet,

“Teach me to make this magical treat.”

Abuelita smiles,

“Be an **observer**, watch and learn,

Then you too can take a turn.”

She sets before me a ball of dough,

Round and golden as the sun.

My eyes wide as saucers, I watch and follow,

Press circles flat as pancakes,

Spoon on apple slices and nose-tickling spices,

Seal it all in, a half-moon envelope of bliss.

Together we write down every step

As the empanadas bake and crisp in the oven,

My stomach rumbling like a hungry bear.

Ah, empanada day!

**- George Santiago**

**Cold Feet**

An **inventor** with feet like ice,

And toes like ten shivering mice,

Looked at clothes, studied feet.

Read about cold and heat,

And knit the first socks, warm and nice.

**OUR WASHING MACHINE**

**Our washing machine is a bear**

That munches up socks by the pair.

He will suds them and grumble

As they spin, turn, and tumble,

Then spit them out, ready to wear.

**Bugged**

A creature has crawled on my knee,

It’s a bug green and round as a pea.

His five wings are fish fins,

He’s got teeth sharp as pins.

Just **imagine** him chomping on me!

I read every bug book I see,

To learn what this creature might be.

I ask scientists too,

But they don’t have a clue.

So I’m bugged by this great mystery.

**Make Connections**

What are different ways to figure things out? Talk about what happens in each poem. ESSENTIAL QUESTION

Which poem has the best way to solve a problem? TEXT TO SELF

**TOEFL Junior:**

clue

spit

treat

**TOEFL:**

apply

bear

bliss

crisp

grumble

hungry(hunger)

imagine(imaginary)

observer

sharp(sharpen)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 1

**INCHWORM’S TALE**

Long ago, Anant and his sister, Anika, went swimming. They swam all afternoon and became very tired. They were exhausted and climbed onto a large, flat rock to rest. Soon they fell asleep.

A strange and mysterious thing happened as they slept. The rock beneath them grew and expanded until it reached the clouds.

Anant awoke, and looked around. “Sister, wake up!” he cried in **disbelief**. “Am I dreaming, or are we among the clouds?”

Anika rubbed her eyes. “You’re not dreaming, brother. This rock has grown while we slept!” The children looked around and saw **fabulous** blue sky and wonderful white clouds.

The children were so high, Anika felt dizzy. Anant searched for a way to climb down, but he could not find a path. Anant and Anika started to cry. They felt fear and **dismay**.

Below, the villagers became worried. Where were the children? They searched the forests, meadows, river, and lakes. Then Isha, the village chief, looked around and noticed Hawk sitting on a tree branch.

“Hawk, will you help us find Anant and Anika?” he asked. “You have sharp, **watchful** eyes and strong wings. They are your best **features**. Please use them to help us find the children.”

Hawk agreed to help and flew up into the sky. He tilted his head and squinted his eyes at the bright sunlight. When he was near the clouds, he spied the children on the rock.

“Don’t be afraid,” said Hawk. “We will rescue you!”

Hawk was unable to carry the children down the rock, so he gathered lots of food for them to eat. Then he brought large leaves to keep them warm. Hawk wanted to make sure they were safe and unharmed.

Hawk flew down to the village and spoke to Isha. Isha called all the animals together and told them they needed help to get the children down. He asked each animal to use its most special feature to climb the tall rock. Several tried and failed.

Mouse’s teeth were strong and **unique**, but they couldn’t help her climb up the rock.

Bear’s huge claws were good for climbing up trees. However, they could not help him scale rocks.

Mountain Lion’s claws were sharp and powerful, but the rock was too slippery and he slid back down.

Finally, a tiny voice filled with enthusiasm spoke up and **offered** to help. “May I try, please?” It’s me, Too-Tock, the Inchworm!”

Inchworm showed them all how skillful she was at climbing. Hawk volunteered to carry Inchworm to the top of the rock. Then she could lead Anant and Anika down the giant mountain. Isha agreed to the plan.

So Hawk carefully picked up Inchworm in his beak. Together they flew to the top of the rock where the children were waiting. Along the way, Inchworm planned for the trip down.

It took almost a week for the three to climb down to the village. Inch by inch, Inchworm led the children carefully down the rocky slope. Every day, Hawk brought food to the children. Every day he reappeared in the village with news for the villagers.

Finally, Inchworm, Anant, and Anika reached the bottom of the rock. Everyone cheered and called inchworm a hero. It was a glorious, **splendid** day.

“From this day on,” said Isha, “I rename the big rock, Too-Tock-Awn-oo-Lah, after the brave inchworm.”

**Make Connections**

What unique feature does Inchworm have? How does it help? ESSENTIAL QUESTION

What do your special features help you do? TEXT TO SELF

**TOEFL Junior:**

enthusiasm

exhausted (exhaustion)

expanded (expand)

giant

glorious

high (height)

scale

slippery (slip)

slippery

slid (slide)

unique

volunteered (volunteer)

**TOEFL:**

reappeared(appear)

dismay

enthusiasm

exhausted (exhaust)

expanded(expansive)

glorious

unique

mysterious

offered (offer)

rescue

scale

sharp(sharpen)

skillful

slope

splendid

tilted(title)

volunteered (volunteer)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 2

**Jane’s Discovery**

Jane slammed the door of the log cabin and raced toward the Indiana woods. Mother and Father insisted that Jane go to school and learn to read. It was September of 1825, and Jane wanted to help on the farm like her brothers. Therefore, she told her parents “No!” and **refused** to learn to read.

Jane scooped up her long skirts and splashed through a small stream. Running helped her collect her thoughts, so she ran for what seemed like hours. She dashed around a tree and wasn’t paying attention. As a result, she tripped over a pair of long legs stretched out in the grass.

The legs belonged to her neighbor, Abe Lincoln. Abe was leaning against a tree reading a book. He smiled stood up, and extended his arm to help Jane up.

Jane recognized Abe and knew what a hard-worker he was. But she also heard he was not like the other sixteen-year-old boys in Perry County. Abe was different because he spent all of his spare time reading books.

“Why are you running so fast?” Abe asked. “Are you hurt?”

Jane frowned. “No, I’m all right,” she said. I’m running because I’m upset. My parents want me to learn to read, and I told them no!”

Abe looked down at his book and then at Jane.

“Reading can change your life,” he said quietly. “Meet me here tomorrow, and I’ll prove to you how important reading is.”

Jane met Abe the next afternoon. He showed her a book about George Washington. One of his favorite teachers had **donated** it to him, and he had read it many times.

Abe began to read aloud while Jane listened carefully. He read about Washington and what a great **leader** he was. He read about Washington’s courage and **bravery**.

“Someday I want to be as courageous as George Washington,” said Abe proudly. “Someday I will be president of the United States, too.”

“I believe you will make a great president,” said Jane. “Look at what a good leader you are now. You’ve completely changed my mind about reading!”

Abe smiled. “Tell your parents you will learn to read,” he said. “Then meet me here every day after school. We will read together and I will help you.”

At first, Jane was **nervous** and uncertain about learning to read, but she met Abe every day like clockwork. Fortunately, Jane’s intense dislike for reading was only a **temporary** feeling. She was getting the hang of it. As a result, her nervousness began to **disappear**. One afternoon, Abe surprised her. To her **amazement**, he gave her his favorite book.

“Thank you,” she said. “Now that I can read, I don’t ever want to stop.”

Years later, Jane opened her newspaper and read the good news. Her friend, Abe Lincoln, had been elected President of the United States. She smiled and thought about the day she tripped over his long legs. That was the day that changed her life.

**PERRY COUNTY TRIBUNE**

**Lincoln Elected!**

Abe Lincoln Elected l6th President

November 6, 1860

Illinois Senator Abraham Lincoln was elected 16th president of the United States of America. He defeated three other candidates in the November 1860 election.

**Make Connections**

How did Abe change Jane’s life? ESSENTIAL QUESTION

Who has helped change the way you think? TEXT TO SELF

**TOEFL Junior:**

completely (complete)

favorite (favorable)

race

temporary

**TOEFL:**

disappear (appear)

candidates (candidate)

donated (donate)

election

extended (extension)

fortunately (fortunate)

frowned (frown)

insisted (insist)

intense

upset

log

nervousness (nervous)

recognized (recognize)

scooped (scoop)

splashed (splash)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 3

**Earth and Its Neighbors**

If the Sun could talk, it might say, “Look at me! Look at my sunspots! I am so hot!” Without the sun, Earth would be a cold, dark planet. How do we know this?

Thanks to the astronomer, Galileo, we know a lot about the sun and the rest of our **solar system**.

**Telescopes: Looking Up**

Galileo did not invent the **telescope**. However, 400 years ago he did build one that was strong enough to study the sky. When Galileo looked into space, he saw the rocky surface of the Moon. When he looked at the Sun, he discovered spots on its fiery surface.

**Astronomy**, or the study of space, began with the simple telescope. But astronomers wanted to look at the sky more closely. They made bigger telescopes that could see further than the one Galileo used. Astronomers still had many questions.

**Satellites: A Step Closer**

In 1958. scientists launched Explorer 1, the first American **satellite**, into space. It was an exciting day for America.

Soon many satellites circled the **globe** and took photographs of Earth, the Moon, stars, and other planets. They collected a large **amount** of information. Satellites even tracked the **temperature** on the planet Saturn.

Scientists have learned many things about the solar system from satellites. That’s why they kept sending more into space. Soon there were hundreds of satellites in space making amazing discoveries, but astronomers wanted to know even more. That’s why they found a way to put a man on the moon.

**One Giant Leap**

In 1961, Alan Shepard became America’s first **astronaut**. He blasted off into space in a rocket and then turned around and came back to Earth. His short trip was a big success. Shepard’s flight proved that people could go into space.

After Shepard, more astronauts went into space. Some orbited the earth. Some walked on the dusty, bumpy **surface** of the Moon. They took pictures and collected moon rocks. Astronauts wanted to answer some important questions. Did the Sun’s **warmth** heat the moon? Could the moon **support** life someday?

Scientists studied the photographs and Moon rocks that the astronauts brought back. They made exciting discoveries using telescopes and satellites. But it wasn’t enough. Scientists wanted to get closer to the other planets. Soon they found a way!

**Hubble and Beyond**

Scientists created another telescope, but this time it was gigantic. They sent it up into space. The Hubble space Telescope was launched in 1990. It’s still up there and orbits the earth above the clouds. It takes clear, close-up photographs of stars and planets It sends fascinating information back to earth. The Hubble helps scientists study Earth and its neighbors. It also helps astronomers see planets outside our solar system.

**More Discoveries Every Day**

Scientists are still asking questions about Earth and its neighbors in space. With the help of satellites, telescopes, and astronauts they will continue to **explore** and find answers.

**What Can We See?**

|  |  |  |
| --- | --- | --- |
| **With Our Eyes** | **With a Simple Telescope** | **With the Hubble Telescope** |
| The Moon | Craters on the Moon | Planets outside our solar system |
| The Sun | Sunspots | Stars bigger than the sun and far, far away |
| Mars | Clouds around Jupiter | Jupiter’s surface |

**Make Connections**

How have we learned about Earth and its neighbors in space? ESSENTIAL QUESTION

What do you see when you look at the sky? TEXT TO SELF

**TOEFL Junior:**

blasted (blast)

continue (continual)

giant

simple (simplicity)

spots/sunspots (spot)

**TOEFL:**

amazing (amaze)

amount

astronomer(astronomy)

blasted (blast)

explorer(explore)

flight

further

launched (launch)

orbited (orbit)

planets (planet)

solar

spots/sunspots(spot)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 4

**BATS DID IT FIRST**

Nature is full of great ideas. Many inventors and scientists just step outside and look around for inspiration and ideas. They often **imitate**, or copy, what they see outdoors. They use nature to inspire their inventions.

One amazing invention was inspired by bats. It’s a special cane that helps blind people navigate and get around.

**Canes Lead the Way**

Many blind people use canes. They tap the canes on the ground in front of them to locate objects that may be in the way. This helps them move around safely as they do their shopping or walk outdoors.

The bat-inspired cane is different from these canes. It sends out sound waves, or signals. These signals are almost **identical** to the ones bats use to find their way in the dark.

**How Bats Get Around**

The scientist that came up with the idea for the new cane was inspired by watching bats. He **observed** the way bats fly at night. The bats make high-pitched sounds that people cannot hear. These sounds create an amazing navigation system for the bats. Here’s how it works.

Bats send sound waves out through their mouth or nose. These sound waves hit objects and then bounce back as an echo. The echo tells the bats how far away an object is and how big it is. This information helps bats find bugs to eat. It is also an **effective** way to keep bats from bumping into trees and other bats.

**A Batty Idea**

The scientist who invented the new cane took what he learned from observing bats. He used a **similar** idea. He started with an ordinary white cane. He wanted the cane to imitate the way bats use sound waves. So, he sketched plans and made a **model** of his invention When he built the cane, the scientist used a special **material** that was lightweight and strong. Then he added sound waves. Finally, a team of scientists tested the cane. It worked!

**How The Cane Works**

The handle of the cane sends out signals. The signals bounce off objects in front of the cane. Then an echo bounces back to the cane’s handle. The person holding it feels buttons on the handle vibrate, or shake. These buttons tell the person how far away and how big the object is.

Scientists and inventors study plants and animals all the time. Their observations have led them to invent many useful things. And like many new inventions, the bat-inspired cane is a good **example** of how great ideas can come from nature.

**Make Connections**

How did bats inspire a cane that helps blind people? ESSENTIAL QUESTION

What is something in nature that inspires you? What would you invent? TEXT TO SELF

**TOEFL Junior:**

navigate

navigation

ordinary

vibrate

**TOEFL:**

alerts (alert)

amazing (amaze)

diagram

effective (effect)

handle

identical

imitate

locate

navigation/ navigate

observations (observation)

observed/ observing (observe)

sketched (sketch)

vibrate(vibration)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 5

**The Long Road to Oregon**

In the spring of 1843, more than 800 **pioneers** began a journey from Independence, Missouri to Oregon City, Oregon. They had 120 wagons and 5,000 cattle. This was one of the first wagon trains to travel west on the Oregon Trail.

**Land of Promise**

Life was very hard in Missouri in the 1800s. Bad weather caused crops to die. Businesses closed. As a result, many people could not find jobs.

Americans wanted a more enjoyable life. They wanted to live in a place where the soil was richer and the weather was more **agreeable** and pleasant.

The United states government was giving away free land to pioneers. So, thousands of people traveled west to Oregon, a territory in the northwest part of the country.

**Getting Ready to Go**

Pioneers knew that **emigration** to Oregon would be difficult. The trip was more than 2,000 miles of dusty, bumpy trails and would take at least five months. The pioneers needed to be prepared.

First they gathered their cows and chickens. Then they packed many pounds of food, cooking pots, tools, and seeds.

Covered wagons were the main form **transportation** on the Oregon Trail. The wagons were stuffed with everything a family would need. There was little room for anything else. As a result, children left books, toys, and most of their clothes behind.

**A Long, Hard Journey**

Planning and packing took weeks. The first thing pioneer families did was hook a team of oxen up to their wagons. Oxen were dependable and strong and could pull the heavy **vehicles**. Next the families joined other pioneer families.

All the wagons traveling together formed a wagon train. The children and healthy adults walked. The sick or tired pioneers rode in the uncomfortable wagons.

Dirty water, sickness, and fierce dust storms made the journey challenging. Bad weather often made the trail impassable. But the pioneers were determined. As a result, they finally reached their new home in Oregon.

**A New Life in Oregon**

When the pioneers got to Oregon, they cleared land and built houses. Then they planted crops. As more emigrants arrived, towns grew. People opened stores and restaurants. Businesses **boomed**. The pioneers worked hard to make their new towns successful. They had found a better life!

Many of the people who live in Oregon today are **descendants** of the brave pioneers who made the journey west from the 1840s to the 1880s. They **appreciate** their family member’s hard work and courage. And they are grateful for the Oregon Trail.

**Learn Your History!**

History is the study of people and events from the past It’s important to know our country’s past. Learning about history helps us appreciate our country and the people who helped build it.

One fun way to learn about history is by reading the stories of the brave people who lived it. You can read diaries of pioneers on the Oregon Trail, or biographies of explorers. These can be more exciting and inspiring than a movie or a television show!

**Make Connections**

How was the Oregon Trail emigration a unique time in history? ESSENTIAL QUESTION

What is your favorite event in history? Describe why. TEXT TO SELF

**TOEFL Junior:**

descendants (descend)

grateful

hook

stuffed (stuff)

territory

unique

wagons (wagon)

**TOEFL:**

adults (adult)

appreciate

agreeable

covered (cover)

explorer(explore)

government (govern)

grateful

healthy

unique

original

sickness (sick)

spring

successful

weather

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 1

**Nail Soup**

Once long ago, Papa and I were walking for miles on a long and winding country road. Finally we approached a large farmhouse surrounded by fields of healthy vegetables.

“Papa, I’m so hungry,” I said.

Papa patted my head and winked. I smiled and nodded back. I admired my Papa. I knew he would find a way to get us a warm meal. We knocked on the door and a well-dressed man and his wife answered.

“Hello,” said Papa. “My son, Erik, is hungry. Could you please spare a morsel of food?”

The man shook his head. “We have lots of food, but we cannot afford to give any of it away,” he said.

“Well, I could cook my **flavorful** nail soup if you would donate a small cup of hot water,” said Papa.

The woman looked at her husband. “Soup from a nail?” she said. “That’s impossible.” But the man’s curiosity overwhelmed him, so he brought a small cup of boiling water.

Papa carefully took out a long, crooked nail and with one **graceful** motion, dropped it into the cup. He stirred the cup of hot liquid.

“This is beginning to smell wonderful,” said Papa.

I smiled at Papa. He was clever and charming, and my admiration for him grew. He could do anything! Then I remembered something he taught me.

“Papa, it is impolite for me to eat nail soup without offering some to everyone,” I said, “Burt there is such a small amount here.”

“We can’t let the boy eat alone,” said the man to his wife. “We can spare more water.”

The woman filled a big pot with water and put it on the stove. When the water boiled, Papa placed the nail into the pot, stirred, and sniffed the air. “The **aroma** is good, but it would be much more aromatic with an onion. Have you any old onions?”

The woman gave Papa three small onions, and he dropped them into the pot.

“Papa, remember how **luscious** nail soup was with carrots?” I asked.

The man jumped up and pulled four plump carrots from a large basket of vegetables on the floor. “How about some beets and cabbages, too?” he said. “I can spare a few of those.”

“And here are some potatoes and green beans,” the woman **interrupted**. “They are **healthful** and nutritious contributions. We grow them ourselves!”

Papa dropped the vegetables into the boiling water while the man grabbed a **variety** of spices and meats. “Here, add these, too,” he said enthusiastically.

Soon the soup was ready, and we sat down to eat. I knew the man and his wife would enjoy nail soup.

“This soup is amazing,” said the woman.” And all from just one nail and a pot of boiling water.”

Papa pretended to be surprised by her amazement, but as usual, he had the perfect answer. “What did you **expect**?” he said. “I told you it would be flavorful.”

The man and woman smiled. “We just didn’t know that sharing a little of our great wealth would taste so good!”

**Make Connections**

Why is making nail soup a smart choice? ESSENTIAL QUESTION

How do you feel when you make good choices? TEXT TO SELF

**TOEFL Junior:**

approached (approach)

enthusiastically (enthusiasm)

motion

**TOEFL:**

admired/ admiration (admire)

afford

alone

amazing (amaze)

amount

aroma

crooked

curiosity

donate

enthusiastically (enthusiasm)

flavorful(flavor)

grabbed (grab)

healthy

healthful

hungry(hunger)

interrupted (interrupt)

liquid

motion

nodded (nod)

offering (offer)

perfect

pretended (pretend)

taste

variety(various)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 2

**The Impossible Pet Show**

My best friend Carla Hernandez called me on Thursday afternoon. “Daniel, meet me in the park near the playground in five minutes. I have a great idea!” This worried me because Carla’s great ideas almost always mean big trouble for me!

I dashed outside and jogged to the park. When I saw Carla, my heart sank because her gigantic dog Perro was with her. I liked everything about Carla *except* Perro. I’ve never had a pet, so I feel uncomfortable and nervous around animals. I’m **embarrassed** to say that I’m afraid of Carla’s dog.

Carla smiled. “Isn’t this the perfect location for a pet show?” she asked. “All the kids in the neighborhood can show off their pets’ **talents** and demonstrate the things they do well. There are plenty of comfortable benches for our parents and friends to sit on. And since you don t have a pet to enter into the show you will be the announcer.”

“I’m sorry,” I **apologized**, “but that’s impossible! Crowds make me nervous and unsure. Besides, I don’t like animals, remember?”

“That’s nonsense,” said Carla. “There’s nothing to be concerned about because you’ll be great!”

Just then, Perro leaped up, slobbered all over me, and almost knocked me down. “Yuck. Down, Perro! Stay!” I shouted. Perro sat as still as a statue. “Wow, you’re good at that,” said Carla. “Now let’s get started because we have a lot to do.”

By Saturday morning I had practiced announcing each pet’s act a hundred times. My stomach was doing flip flops by the time the **audience** arrived. The size of the crowd made me feel even more anxious.

When the show began, I gulped and announced the first pet. It was a parakeet named Butter whose talent was walking back and forth on a wire. When Butter finished, everyone clapped and cheered. So far, everything was perfect, and I was beginning to feel calmer and more relaxed. I **realized** that being an announcer wasn't so bad after all.

Then it was Carla and Perro’s turn.

“Sit, Perro,” she said, but Perro didn’t sit.

Perro was not paying **attention** to Carla. He was too interested in watching Jack’s bunnies jump in and out of their boxes. Suddenly, Perro leaped at the bunnies who hopped toward Mandy and knocked over her hamster’s cage. Pudgy, the hamster, escaped and began running around in circles while Kyle’s dog, Jake, howled. This was a disaster, and I had to do something.

“Sit!” I shouted at Perro. “Quiet!” I ordered Jake.

“Stay!” I yelled. Everyone – kids and pets – stopped and stared at me. Even the audience froze.

“Daniel, that was incredible,” said Carla. You got the pets to settle down. That’s quite an **achievement**.”

Sadly, that was the end of our pet show. But now I have more **confidence** when I have to speak in front of people. And even though I am still nervous around animals, Perro and I have become great friends. And I’ve discovered my talent, too.

**Make Connections**

How did Daniel use what he knows to help others? ESSENTIAL QUESTION

Discuss whether you would like to take part in a pet show, and why. TEXT TO SELF

**TOEFL Junior:**

enter (entry)

nonsense

wire (wireless)

**TOEFL:**

announcer/announced(announce)

anxious

apologized(apologize)

audience

concerned

confidence

demonstrate

disaster

embarrassed (embarrass)

entered (entry)

flip

forth

howled(howl)

incredible

nervous

nonsense

perfect

realized (realize)

relaxed (relax)

statue

talents (talent)

watching (watch)

yelled (yell)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 3

**GRAY WOLF! RED FOX!**

Did you ever see a photograph of a gray wolf or a red fox? Don’t they look a lot like dogs? Aren’t they fantastic-looking animals? Well, dogs, foxes and wolves are all **related**. They are all members of the same family. And while gray wolves and red foxes may look alike, they are different in many ways.

**LOOKS ARE EVERYTHING**

The gray wolf is the largest member, or a part, of the wild dog family. An adult wolf is the size of a large dog. The red fox is smaller and weighs less. Both animals have **excellent** hearing. The red fox can even hear small animals digging holes underground.

And just take a look at those beautiful tails! The gray wolf and red fox both have long, bushy tails. The wolf’s tail can be two feet long. The fox’s tail is not as long but has a bright, white tip. In the winter, foxes use their thick, furry tails as **protection** from the cold.

Foxes and wolves also have thick fur. Their coats can be white, brown, or black. However, red foxes most often have red fur, while a gray wolf’s fur is usually more gray and brown.

**FINDING FOOD**

Gray wolves and red foxes live in many different habitats. They live in forests, deserts, woodlands, and grasslands. But as more people build roads and shopping centers, both animals have lost their homes. The red fox has adapted well, or made changes, to fit into its **environment**. Now more foxes make their homes close to towns and parks. Wolves, however, stay far away from towns and people.

Foxes and wolves are not in **competition** for food. They have different diets. Red foxes **prefer** to hunt alone and eat small animals, birds, and fish. They also like to raid garbage cans and campsites for food. Wolves work together in packs, or groups, to hunt large animals, such as moose and deer.

**DAY-TO-DAY**

Wolves live in packs of four to seven. They do almost everything together. They hunt, travel, and choose safe places to set up dens for **shelter**. Foxes, on the other hand like to live alone. They usually sleep in the open or find an empty rabbit hole to call home.

Both wolves and foxes communicate by barking and growling. The gray wolf also howls to **alert**, or warn, other wolves when there is danger nearby. The red fox signals in a different way. It waves its tail in the air to caution other foxes.

The gray wolf and red fox are members of the same family and have many things in common. But they really are two very different animals.

**Make Connections**

How have the gray wolf and the red fox adapted to living in North America? ESSENTIAL QUESTION

Which animal would you like to learn more about? Why? TEXT TO SELF

**TOEFL Junior:**

adapted (adapt)

caution

garbage

**TOEFL:**

adapted (adapt)

adult

communicate

alert

alone

danger

desert

diet

excellent

fit

howls(howl)

mammals (mammal)

raid

warn

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 4

**Firsts in Flight**

Orville and Wilbur Wright stood on a cold, windy beach in Kitty Hawk, North Carolina. The brothers traveled a long way from their home in Dayton, Ohio to test their newest flying machine. Flying had been their dream since their father had given them a toy helicopter.

The Wright brothers owned a bicycle shop in Dayton. In addition to selling, building, and repairing bicycles, they built flying machines. They flew the first one in 1899. However, the winds weren’t strong enough to keep the machine in **motion**. So they looked for a place where the winds were stronger. As a result, they chose Kitty hawk. It was not only windy there, but the sandy beaches made for soft landings.

Because their first **flight** was not successful, the Wright brothers learned a lot about flying. As a result, they built a better glider with bigger wings in 1900. This glider did not work very well either. The brothers did not give up. That’s why they experimented with a new glider in 1902. Then in 1903, they built the *Wright Flyer*, their first airplane with an engine.

**Flying Firsts**

By December 17, the brothers were ready to test the *Wright Flyer*. Orville started up the engines to power the plane. He **controlled** the plane, while Wilbur watched from the ground. The *Flyer* was **launched** into the sky. The plane moved in an upward **direction**, and the flight lasted twelve seconds. The Wright brothers had conquered gravity and unlocked the secrets of flying.

Orville and Wilbur kept improving their planes, and their flights became longer. Soon, other people tried to fly airplanes.

**Will It Fly?**

Do an experiment on Plying Using paper airplanes.

**Materials needed:**

·pencil ·paper ·ruler

**Directions:**

1. With a partner, Fold two paper airplanes. Make the wing sizes different in each plane.

2. Gently throw one plane.

3. Measure and record how Far the paper plane Flew.

4. Take turns throwing the plane Four More times. Each time, Measure and record how Far it Flies.

5. Repeat the experiment with the other airplane.

6. Compare the plane’s Flights. Then discuss what you learned about Flight.

Alberto Santos-Dumont was an inventor and pilot from Brazil. In 1906, he made the first official flight in front of an audience. The next year, the French pilot, Henri Farman, took along a **passenger** in his plane. They flew for one minute and fourteen seconds.

**Better Flying Machines**

Because of these flights, airplane research became **popular** with inventors. Before long, better planes were traveling longer distances. In 1909, a French pilot flew an airplane across the English Channel. This plane was very different from the Wright brothers’ plane. The new plane had only one long wing across its body. It looked a lot like today’s airplanes.

Soon inventors began building airplanes that could carry more people. By 1920, several new companies offered passengers the chance to fly. Humans had done the **impossible**. They had figured out how to fly.

**Make Connections**

How did the Wright brothers help people fly? ESSENTIAL QUESTION

Tell what you know about airplanes. Discuss other ways to fly. TEXT TO SELF

**TOEFL Junior:**

compare (comparable)

motion

repeat

**TOEFL:**

audience

compare (comparable)

directions (direction/direct)

flight

glider (glide)

gravity

humans(human)

lasted (last)

launched (launch)

motion

offered (offer)

successful(success)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 5

**Ginger’s Fingers**

Ginger’s fingers are shooting stars,

They talk of adventurous trips to Mars.

Fingers talking without words,

Signing when sounds can’t be heard.

Ginger’s fingers are ocean waves,

They talk of fish and deep sea caves.

Fingers talking without words,

Signing when sounds can’t be heard.

Ginger’s fingers are butterflies,

They talk of a honey-gold sunrise.

Fingers talking without words,

Signing when sounds can’t be heard.

**The Giant**

Dodge, dart, dash,

Zigzag, slash!

I sizzle, SIZZLE when I dribble,

I’m lightning on the court.

My team calls me the Giant,

Even though I’m kinda short.

The other team might laugh to see

A player tiny as a flea.

But I’m a rocket, fiery hot,

Watch me soar, SOAR, on my jump shot!

Stretching, flexing, push, push, PUSH,

My ball flies up and in--Swoosh Woosh!

I show them all

You don’t need tall

To rule the ball!

**Captain’s Log,**

**May12, 1868**

We set sail from a port in Spain,

Sun high, no sign of rain.

The sea was satin, so blue--so blue.

Our ship was a bird, we flew--we flew.

Just past noon, how very weird,

Came a sound that we most feared.

Thunder rumbled, a giant drum.

Thunder rumbled, rum tum tum.

Rain was pouring, pouring.

The wind was a monster, roaring, roaring.

My crew, extremely terrified,

Froze at their posts, pale and wide-eyed.

A huge wave lifted up our ship,

My feet began to slip, slip, slip.

I knew that it was up to me,

To guide us through that stormy sea.

I grabbed a rope, reached for the mast,

And got back to the helm at last-at last

Shook off the rain, looked at my crew,

“Steady lads, I’ll get us through.”

The crew heard my call,

Each lad stood up tall.

All hands now on deck, we trimmed every sail.

Courageous together, we rode out that gale.

**Make Connections**

Talk about how the person in each poem is inspiring. ESSENTIAL QUESTION

In the poems, which person is most inspiring to you? Why? TEXT TO SELF

**TOEFL Junior:**

giant

high (height)

slip

**TOEFL:**

court

crew

dart

dodge

flexing(flexible)

grabbed (grab)

log

monster

steady

terrified(terrify)

weird

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 1

**Juanita and the Beanstalk**

Juanita lived in a small, **humble** cottage with her Mamáand her pet goat, Pepe.

One day Mamásaid, “There has been no rain, and our garden has dried up. Juanita, you must go to town and sell your goat. Use the money you get as **payment** to buy some food.”

“I don’t want to sell Pepe!” cried Juanita. She petted the goat lovingly. But she was an obedient girl and would not disobey her mother. **Reluctantly** she took Pepe to town. On her way she met an old man who patted Pepe kindly.

“He is for sale,” said Juanita with tears in her eyes.

The man replied, “I have no money, but I have some special *frijoles*. If you plant these beans you will never go hungry again. We can **barter**, and I will trade you these beans for your goat.”

Juanita thought carefully as she **considered** the man’s offer. He seemed caring and considerate. Certainly he would be kind to Pepe, so Juanita finally decided to sell Pepe. She accepted the beans.

When Juanita got home, Mamáwas upset with her decision. “You have returned home with no food and no money!” she exclaimed.

Juanita had to **admit** that Mama was right. All she had were three beans, and she still missed Pepe. Worst of all, Mamáwas unhappy.

Juanita planted the beans in the backyard and went to bed. The next morning she woke up and went outside. A gigantic beanstalk as tall as the clouds stood where Juanita had planted the beans.

Juanita was curious. “I’m going to see what’s up there,” she said to herself, so Juanita climbed the beanstalk. At the top she saw a grand and **magnificent** palace in the middle of a field. She knocked on the door and a maid answered.

“Hide!” cried the maid. “The giant is coming now, and he doesn’t like strangers” So Juanita quickly crawled under the table.

The giant stomped in carrying an unhappy hen in a cage. He said, “Lay, hen, lay!” Juanita’s curiosity grew, and she peeked from under the table. Then she saw the hen’s **creation**. Juanita gasped. It was a golden egg!

The poor hen reminded Juanita of Pepe. She wanted to give it a better home. She ran between the giants legs and grabbed the cage. She raced to the beanstalk. The giant roared in anger and chased after her. Juanita was able to slide down the beanstalk, but the giant was too heavy. He caused the stalk to break and crash to the ground. The beanstalk was gone forever, and Juanita and the hen were safe.

The hen was happy to have a new home and laid many golden eggs. Mamá was happy to use the eggs to buy everything they needed. And Juanita was happy because she was able to trade a golden egg with the old man to get Pepe back!

**Make Connections**

How does Juanita get what she needs? ESSENTIAL QUESTION

What are some ways you can get what you need? TEXT TO SELF

**TOEFL Junior:**

exclaim (exclaimed)

giants (giant)

grand

humble

race

slide

**TOEFL:**

admit

barter

considered (consider)

considerate

crash

curiosity/curious

exclaimed (exclaim)

gasped (gasp)

grabbed (grab)

upset

magnificent

offer

reluctantly (reluctant)

reminded (remind)

stalk

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 2

**The New HOOP**

Marco **gazed** at the basketball hoop and threw the ball up. It whizzed through the air. “Score!” he shouted as the ball fell through with a swish.

“You won this time, but I’ll beat you next time, Marco!” said Kim as the two friends made their way home. “I wish we could play at home, too instead of only at school. It's not fair.” The basketball hoop in their neighborhood park had been ruined when a tree fell and crushed it.

“My dad says the Parks Department doesn’t have enough money to buy a new hoop yet,” grumbled Marco in **frustration**.

“I feel so **discouraged**,” said Kim. “I guess there’s nothing we can do.”

Marco and Kim walked past the city’s **recycling** center. They waved at the manager, Mr. Morse. His job was to separate the plastic, paper, and metal items people brought to him. He was transferring cardboard from an overflowing bin into large, empty containers.

Marco stared at all the old stuff. “That gives me an idea!” he said. “Mr. Morse, do you have anything we could reuse to make a basketball hoop?”

Mr. Morse picked up a plastic laundry basket. “We were going to recycle this basket, but I think it’s reusable.”

“It looks useless, old, and cracked,” said Kim.

“No, it could be useful,” said Marco. “We can cut off the bottom to make a fine hoop, and then an adult can help us attach it to a post.”

Kim frowned. “I want a new basketball hoop,” she said. “Not someone else’s hand-me-down.”

“Why?” wondered Marco. “Reusing things is a great way to practice **conservation**. It stops waste.”

“I guess we can try,” said Kim. “But I still don’t believe it will be as good as a new one.”

They took the basket to Marco’s house. His older brother, Victor, got some leftover wood from an old building project. Together they **tinkered** with the materials and made a post and a backboard.

When Marco went to attach the basket to the backboard, he found his two cats napping in it. “I see someone has found a way to reuse the basket already!” he laughed. He let them sleep a few minutes longer.

When all the parts were ready, there was only one thing **remaining** to do. Marco, Kim, and victor took everything to the park. Kim helped dig the hole for the post, but she was still unsure. Next, Marco helped Victor ease the backboard and basket carefully into the hole.

“It looks better than I thought it would!” said Kim.

“Here’s the real test!” grinned Marco. He tossed her the basketball. Kim bounced the ball, aimed, and shot a perfect basket. She was **jubilant**.

“Wow, I was wrong,” she said.

“This recycled basketball hoop is really great. Now we can play whenever we want!”

“Yes, and I can beat you whenever I want,” grinned Marco.

“Oh, no you can’t!” laughed Kim. The two friends played basketball until dinner time.

**Make Connections**

What problem do Kim and Marco have? How do they reuse something to solve it? ESSENTIAL QUESTION

Discuss how you reused something to solve a problem How did it work? TEXT TO SELF

**TOEFL Junior:**

attach

conservation

gazed (gaze)

stuff

**TOEFL:**

adult

attach

beat

conservation

containers (container)

crushed (crush)

frowned (frown)

gazed (gaze)

grumbled (grumble)

overflowing (overflow)

perfect

useless

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 3

**Rescue Dogs Save the Day**

Rescue teams are there when we need them. They **respond** quickly to help people in trouble. They are brave heroes But heroes aren’t always people. Heroes can be dogs, too!

**Rescue Dogs Are Heroes**

Rescue dogs are always ready to go to work. They team up with police, fire and other rescue workers. They are good at finding people who are lost. They rescue families after earthquakes and other **disasters**. They work in all types of weather. And the best news is that rescue dogs can do their jobs with no special **equipment**. All they need is their excellent hearing and a good nose!

Rescue dogs are smart and brave. They listen well to commands and do their jobs even when they are tired, thirsty, or hungry. They are friendly and get along well with their handlers, the people who work with them. They also must be obedient and do what they are told.

Certain breeds of dogs are easier to train to work in dangerous rescue situations than others. The Border Collie is one breed of dog used during disasters and emergencies. Border collies can work for a long time. They do not get tired easily, and that’s important. But dogs need more than energy. They also need to follow commands, and the takes a lot of training.

**Getting Ready to Work**

Rescue dogs begin their training as puppies. It can take up to two years to completely train a rescue dog. Then it is able to save people in **harmful** and dangerous situations.

The dogs learn to work outdoors in heat, cold, and bad weather. They run, jump, and climb for many hours every day. Rescue dogs also learn to ignore everything around them while they are working. This helps them to focus on the job and keeps them from making **careless** mistakes.

Everything a rescue dog learns to do has a **purpose**. Even friendship is not **accidental**. A dog and the people it works with must learn to communicate as a team. They trust each other. And when they have practiced and trained enough, they are ready to participate, or take part in, a real rescue mission.

**Best Rescue Dog Breeds**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| These dogs make great rescuedogs. |  |  |  |  |
| **Dog Breed** | **Labrador Retriever** | **German Shepherd** | **Bloodhound** | **Border Collie** |
| **Rescue Trait** | friendly | brave | Great sense of smell | Lots of energy and stamina |

**Good Dog!**

When a hiker is lost, a rescue dog sniffs the air and the ground to find her. A dog’s sense of smell is much stronger than a person’s. Rescue dogs can even smell someone trapped under fifteen feet of snow. When a dog finds someone, it barks to alert its partner. The rescue worker trusts the dog, so the team works quickly to save a life. At the end of every rescue, the dog gets praise and treats for doing a great job.

Sometimes rescue teams go to schools to teach children about safety and disaster **prevention**. They show children how to stay safe and what to do during emergencies. This job is fun for rescue dogs. They get lots of attention for just doing what they do best--helping people. Rescue dogs really are heroes!

**Make Connections**

How do rescue workers and dogs work together in an emergency? ESSENTIAL QUESTION

What do you think would be the best thing about working with a rescue dog? TEXT TO SELF

**TOEFL Junior:**

breeds (breed)

completely (complete)

dive

during (duration)

focus

treats(treat)

**TOEFL:**

communicate

accidental (accident)

alert

breeds (breed)

completely (complete)

disaster

equipment

excellent

handlers (handle)

hiker(hike)

ignore

trait

trapped (trap)

prevention

rescue

retriever (retrieve)

save

stamina

weather

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 4

**Dolores Huerta**

**GROWING UP STRONG**

Dolores Huerta learned to help people by watching her mother. Good **citizenship** was important to her, and she taught Dolores that women can be strong leaders. When Dolores grew up, she had the same beliefs.

**Good Citizens**

Dolores was born on April 10, 1930. She lived in a small town in New Mexico until she was three years old. Then she moved to California with her mother and two brothers. Dolores grew up watching her mother **participate** in community organizations. Her mother believed that all people deserved to be treated fairly.

When Dolores was a young girl, her mother owned a hotel and a restaurant. Many farm workers who live in their town were poor and hungry. They were paid very little for their hard work. Dolores’ mother let them stay at her hotel and eat at her restaurant for free. This taught Dolores and her brothers that good citizens get involved in the community by helping their neighbors.

**Dolores Goes to School**

Dolores saw how hard life was for farm workers in California. She wanted everyone to be treated fairly. This attitude **continued** as she attended college and studied to become a teacher.

Many of the students that Dolores taught were the children of farm workers. These students were often tired and hungry. They came to school barefoot because they had no shoes. Dolores knew she needed to help them. As a result, she went to her school’s principal and **proposed** some good ideas. She tried to get free lunches and milk for the children. She tried to get them new clothes and shoes.

Trying to help the children was a **daring** thing for Dolores to do. The other teachers did not agree with her ideas. Dolores risked a lot, but her beliefs did not **waver**. She decided to do something about the **unfairness** she saw. She wanted to find a better way to help farm workers and their families.

**Dolores: Strong and Fair**

**Dolores Stands Strong**

Every day Dolores saw people working in unusually unsafe and disagreeable conditions. She was **horrified**. Many farm workers had little money to feed their families Dolores decided to do something.

In 1955, Dolores met César Chávez. He wanted to make life better for farm workers, too. Dolores and César organized the workers into a group called the National Farm Workers Association. This group protected the rights of the farm workers. It helped make big farms treat them better. As a result, working conditions on the farms improved.

Growing up with a mother who cared about other people taught Dolores to be a good citizen. Her kind and brave acts helped farm workers and their families. Who is a good citizen? Dolores Huerta is!

**Make Connections**

How did Dolores Huerta’s actions make her a good citizen? ESSENTIAL QUESTION

What can you do to improve people’s lives? TEXT TO SELF

**TOEFL Junior:**

continued (continual)

deserved (deserve)

treat/treated(treat)

principal

**TOEFL:**

attitude

community

disagreeable (agreeable)

association

attended(attend)

conditions (condition)

continued (continue)

daring

dates (date)

deserved (deserve)

unfairness (unfair)

principal

proposed (propose)

rally

risked (risk)

waver

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 5

**Here Comes Solar Power**

What do you have in common with a car and a factory? You both need **energy** to run. Energy keeps things moving.

**Energy Today**

You get your energy from eating healthful foods. Most factories, homes, and cars get their energy from fossil fuels. Coal, petroleum, and natural gas are fossil fuels. They have been the **traditional**, or usual, energy **sources** for more than a century. Today, most of the energy we use in the United States comes from burning fossil fuels.

But these fuels come from deep under the Earth’s surface, and they are running out. They cannot be reused. Once a fossil fuel is gone, it’s gone forever. So we need alternative energy sources to **replace** them. Scientists know that there is no other way to keep our country going and growing. So they are looking for new, alternative sources of energy that won’t run out.

**Cheaper and Cleaner**

Solar power is one source of **renewable** energy. And it is not expensive. As a result, many people are placing solar panels on the roofs of homes and large buildings. Solar panels look like giant mirrors, and they capture energy from the Sun.

On a bright day the Sun’s rays hit the solar panel and cause it to **produce** electricity. Then the electricity flows into the building. As a result, there is enough energy to raise the temperature inside homes, and turn on lights, stoves, and computers.

**The Future**

More companies are turning to solar power to replace fossil fuels. It’s **natural**. That means it isn’t made, or changed, by people. Solar power is cheaper than fossil fuels, and it does not create **pollution**.

Today there are millions of people around the world using solar power to produce electricity for their homes and businesses. Someday solar power may completely replace fossil fuels.

**GO SUNSHINE!**

Renewable energy is where it’s at. And solar power is at the top of our list. Here are the top reasons why solar energy is so hot!

·Solar power is cheaper than fossil fuels.

·It is renewable.

·It doesn’t cause pollution and is good for our environment.

·Power from the Sun is always available.

·Solar power is natural.

Solar energy can do just about everything that fossil fuels do. Everyone should use solar power. It’s good news for the planet!

**Thanks to solar power,**

**Paul can power up and**

**listen to his MP3 player.**

**Make Connections**

Why is solar power a good source of energy? ESSENTIAL QUESTION

What are some ways you might use solar power? TEXT TO SELF

**TOEFL Junior:**

available

capture

completely (complete)

expensive (expense)

giant

**TOEFL:**

alternative

available

burning

completely (complete)

planet

pollution

raise

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 1

**ATHENA AND ARACHNE**

**CHARACTERS** **DIANA:** Arachne’s friend

**NARRATOR** **ATHENA:** a Greek goddess

**ARACHNE:** (uh-RAK-nee) a weaver **MESSENGER**

**SCENE ONE**

***Athens, Greece, a long time ago, Arachne’s home.***

**NARRATOR:** Long ago, Arachne and her friend Diana sat weaving.

**DIANA:** Oh, Arachne! That cloth is so beautiful.

***Arachne admires her cloth.***

**ARACHNE:** I know. Many people want to **possess** my cloth, but few can afford it. Only those with great **wealth** can buy it.

**DIANA:** Yes, it’s true that people value your cloth. It is one of their most valued possessions. Your weaving are a real **treasure**. Some say that you learned your weaving skill, or talent, from the goddess Athena.

**ARACHNE:** It was not **necessary** for me to learn from a goddess. I was born with my talent. I am a much better weaver than Athena, and I’m sure I could beat her in a weaving competition!

***Diana is worried, stops weaving and looks at Arachne.***

**DIANA:** Ssshhh! I hope Athena isn’t listening, or you’re in big trouble!

**ARACHNE:** Nonsense! There’s no reason to be **alarmed** or worried. Athena is much too busy to come down from Mount Olympus to compete with me.

**SCENE TWO**

***Mount Olympus, home of Athena. A messenger arrives.***

**MESSENGER:** Goddess Athena! I have news from Athens. The weaver Arachne says she can beat you in a weaving competition. She’s **obsessed** with her skill and thinks she is the best weaver in Greece!

**ATHENA:** I’ll show her who weaves the finest cloth! Her obsession with weaving must end. Please get me my cloak. ***Messenger hands Athena her cloak.***

**ATHENA:** Arachne cannot talk about me that way! If she refuses to apologize, I will make her pay for her boastful words. Her **anguish** will be great!

**SCENE THREE**

***Arachne’s home. There is a knock at the door.***

**ARACHNE:** Who’s there?

**ATHENA:** Just an old woman with a question.

***Athena is hiding under her cloak. She enters the room.***

**ATHENA:** Is it true that you challenged the goddess Athena to a weaving competition?

**ARACHNE:** Yes, that’s right. *Athena drops her cloak.*

**ATHENA:** Well, I am Athena. and I am here to compete with you!

**DIANA:** Arachne, please don’t! It is unwise to compete with a goddess!

***Arachne and Athena sit down at the empty looms and begin to weave furiously.***

**ARACHNE:** I am ready to win and get my **reward**!

**ATHENA:** There’s no prize if you lose!

**NARRATOR:** Arachne and Athena both wove beautiful cloths. However, Arachne’s cloth was filled with pictures of the gods being unkind.

**ATHENA:** Arachne, your weaving is beautiful, but I am insulted and upset by the pictures you chose to weave. You are boastful, and your cloth is mean and unkind. For that, I will punish you.

***Athena points dramatically at Arachne. Arachne falls behind her loom and crawls out as a spider.***

**ATHENA:** Arachne, you will spend the rest of your life weaving and living in your own web.

**NARRATOR:** Arachne was mean and boastful, so Athena turned her into a spider. That’s why spiders are now called arachnids. Arachne learned that bragging and too much pride can lead to trouble.

**THE END**

**Make Connections**

What does Arachne value? How does it cause her trouble? ESSENTIAL QUESTION

What do you value? Why do you value it? TEXT TO SELF

**TOEFL Junior:**

enters (entry)

necessary

nonsense

value

weave/weaves/weaver(weave)

**TOEFL:**

challenge

admires (admire)

afford

anguish

apologize

beat

boastful

bragging (brag)

characters (character)

compete

entered (entry)

finest(fine)

furiously (furious)

insulted (insult)

upset

narrator

nonsense

talent

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 2

**The Big Blizzard**

Rosa and Eddie Hernandez huddled close to the radio and listened carefully to the scratchy voice of the news announcer.

“The blizzard of 1947 is the biggest snowstorm in New York City history! Tremendous amounts of snow and terrible weather **conditions** caused the city’s subway system to shut down yesterday from Wall Street to Spanish Harlem. Parents are even **forbidding** their children to go outside because it is so dangerous. The weather **forecast** for today predicts that the snow will stop. In the meantime, Mayor O’Dwyer’s message to all New Yorkers is this: Help each other in the face of this disaster.”

“Oh, mamá!” whispered Rosa. “Will papá ever get home from work?”

Mamá gave Rosa a big hug. “He must be stuck at work and unable to get home,” she said. “He is **stranded**, but don’t worry. The snow is slowing down now and I’m sure he will make it home soon.”

Mamá went into the kitchen to make lunch. She came out carrying her coat and scarf.

“We are out of milk and bread, so I need to try to get to Maria’s Market,” said mamá.

Rosa and Eddie jumped up and begged to go with her. Mamá had kept them inside for two days because it was snowing too hard to go out.

“NO,” said mamá. “It’s too cold.”

Rosa and Eddie knew they shouldn’t **argue** with mamá, but they were tired of being indoors.

“Oh please, take us outside! We can all go to the store together!” said Eddie.

“Okay,” said mamá with a sigh. “But we have to stick together and stay close to each other.”

Mamá helped Rosa and Eddie bundle up in their uncomfortable, but warm, wool clothes. When they got outside, they were **astonished** and amazed to find a wall of snow several feet high! Luckily, their neighbor Mr Colòn arrived with two metal shovels.

“Who wants to help dig out?” he asked.

Mamá, Rosa, and Eddie took turns shoveling snow. It was hard work, but no one fussed or **complained**. When they were done, they looked across the street. Maria’s Market was still snowed in. Mrs. Sanchez, the owner, was trying to clear the snow with a small broom.

“Mr. Colòn, may we borrow your shovels, *por favor*?” asked Rosa. “I think we need to give Mrs. Sanchez a hand.”

Shoveling the walk in front of the store was easy. It was a piece of cake for Rosa and Eddie. They laughed and threw snowballs, too Mrs. Sanchez was grateful for their help. “*Gracias*,” she said, and gave mamá milk and bread from her store as thanks.

As Rosa and Eddie crossed the snowy street with mama to go home, they heard a deep, familiar voice.

“Is that my Rosa and Eddie?”

“Papa! they shouted and ran over to him. Rosa told him breathlessly about how they helped Mr. Colòn and Mrs. Sanchez.

“It is such a **relief** and a comfort to finally be home,” said papá. “I am so proud of you for helping our neighbors.”

**Make Connections**

How does the weather affect the Hernandez family? ESSENTIAL QUESTION

Tell about a time when you or your family helped out in bad weather. TEXT TO SELF

**TOEFL Junior:**

bundle

complained (complaint)

favor (favorable)

grateful

high (height)

stick

**TOEFL:**

affect

amazed

amounts (amount)

announcer(announce)

astounded (astound)

complained (complaint)

disaster

familiar(familiarize)

forbidding(forbid)

grateful

tremendous

scratchy (scratch)

sigh

stick

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 3

**ROCKETING INTO SPACE**

When James A. Lovell, Jr. was a boy, he loved to build rockets and launch them into the sky. But his dreams went a lot farther than his rockets. Like many boys who grew up in the 1930s, Lovell dreamed of being a pilot. And as he watched his rockets soar, he knew someday he would, too.

**HIGH FLYING DREAMS**

Lovell was born in Cleveland, Ohio, in 1928. He worked hard in school and planned to go to a special college to study **astronomy** and rockets. Unfortunately, he didn’t have enough money to attend. Lovell had to figure out another way to reach his **goal**.

Lovell was **motivated** to find a way to fly rockets. So, he went to college near his home for two years and then signed up for flight training at the United States Naval Academy. After four years at the academy, Lovell joined the United States Navy and became a **professional** naval test pilot. His job was to fly planes before anyone else was allowed to fly them.

**James A. Lovell, Jr. became**

**an astronaut in 1962. He flew**

**four space missions.**

**PILOT TO ASTRONAUT**

As a pilot, Lovell spent more than half of his flying time in jets. He taught other pilots how to fly. He also worked as a **specialist** in air flight safety. Soon, the National Aeronautics and Space Administration, or NASA, put out a call for astronauts. Lovell applied for the job because he had all the **essential** skills needed to fly into space. As a result, NASA chose him. By 1962, James Lovell was an astronaut! He had finally reached his goal.

**BIG CHALLENGES**

Lovell flew on three space missions, and then, in April 1970 he became commander of the Apollo 13 mission This was a big responsibility and a great honor. This was also one of the biggest **challenges** of Lovell’s life.

Apollo 13 was supposed to land on the moon. Two days after leaving Earth, however, the spacecraft had a **serious** problem. One of its oxygen tanks exploded. The crew did not have enough power or air to breathe. They could not make it to the Moon.

Lovell **communicated** with he experts at NASA. No one knew what to do at first. Then the team on the ground did some **research** and came up with a solution. The astronauts followed the team’s directions and built an invention using Plastic bags, cardboard and tape. It worked! It cleaned the air in the spacecraft. But the next problem was even bigger. How were the astronauts going to get back to Earth?

**A JOB WELL DONE**

The NASA team decided the astronauts would use the lunar, or moon module as a lifeboat. James and the other two astronauts climbed into the smaller spacecraft and shut the hatch tight. They moved away from the main spaceship. With little power, water, food, or heat, the astronauts listened carefully to the team at NASA.

The trip back to Earth was dangerous and scary. For almost four days, the astronauts traveled in a cramped capsule. They were cold, thirsty, and hungry. Then, with millions of people watching on television, the module fell to Earth.

Years later, James Lovell said that Apollo 13 taught him how important it was for people to work together. His favorite memory was when the capsule splashed down in the Pacific Ocean and the diver knocked on the window to let them know they were safe.

**A DREAM COME TRUE**

**DID YOU EVER DREAM OF GOING INTO SPACE? CHECK OUT SPACE CAMP!**

Space camps have been around for more than 30 years. They make science, math, and technology exciting so kids will want to learn more. And like the NASA training programs, these camps teach the importance of teamwork and leadership.

**Make Connections**

How did James A. Lovell’s goals as a child help him as an adult? ESSENTIAL QUESTION

Tell about one of your goals and how you might achieve it. TEXT To SELF

**TOEFL Junior:**

applied (apply)

diver

essential

exploded (explode)

favorite (favorable)

high (height)

lunar

motivated(motivate)

naval

professional

**TOEFL:**

academy

achieve

administration

adult

challenge

communicate

applied(application)

astronaut(astronomy)

attend

commander

crew

directions (direct)

exploded(explode)

unfortunately (fortunate)

hatch

launch

leadership

naval

oxygen

serious

spaceship

splashed (splash)

supposed (suppose)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 4

**Butterflies Big and Small**

There are more than 725 species, or kinds, of butterflies fluttering around the United States and Canada. These **fascinating** creatures taste leaves with their feet and only see the colors red, yellow, and green. The Monarch butterfly and the Western Pygmy blue butterfly share these same traits, but they are also different in many ways.

**Size and Color**

The Western Pygmy blue butterfly is the smallest butterfly in the world. It is just about a half-inch across from wing tip to wing tip. That’s smaller than a dime!

Monarch butterflies are much bigger. They measure about four inches across.

Size is not the only way Monarchs are different from Pygmy Blues. Monarch butterflies are a bright orange color with black markings. That makes them easy to see. Pygmy Blue butterflies are mostly brown and blue, and they blend in with their surroundings. Many people walk right by Pygmy Blues, **unaware** that they are even there.

**Moving Around**

Almost all butterflies migrate, or move to different areas. The Monarch’s journey is the longest migration of any butterfly in the world. It spends summers in the northern United States and Canada. Then it migrates south to Mexico in early fall. Many Monarchs travel more than 3,000 miles.

Western Pygmy Blue butterflies **inhabit** southwestern deserts and marshes from California to Texas. They migrate short distances north to Oregon, and also to Arkansas, and Nebraska.

Both Monarchs and Blue Pygmies migrate when the weather gets chilly. Butterflies are cold-blooded insects. They are hot when the weather is hot and cold when the weather is cold. As a result, both butterflies migrate to stay warm. They also journey north or south to find food.

**Finding Food**

The Western Pygmy Blue drinks the nectar of many kinds of flowers. It finds the sweet, thick liquid easily, so its population has steadily grown. However, Monarch butterflies are not so lucky.

Just like the Pygmy Blue, Monarch butterflies sip nectar from flowers. But the Monarch butterfly has one main food **requirement**--the milkweed. Monarch butterflies must find this plant along their migration route. But what happens if there are no milkweed leaves?

When people build houses and roads, there are fewer places for Monarchs to find milkweed. If the Monarch cannot find food, its population will **dedicate** ease. The Western Pygmy Blue and Monarch butterflies are not **endangered**, or at risk for becoming extinct now, but biologists are worried. Many other butterflies are endangered because people destroy their habitats.

**Help Butterflies**

Like all **wildlife**, Monarch and Pygmy Blue butterflies should be **respected**. People need to preserve butterfly habitats. To help they can work to change laws, plant milkweed, and make it **illegal** to destroy animal habitats.

Learning about butterflies and what they need to survive is important. That way there will be plenty of Western Pygmy blue and Monarch butterflies for future generations to enjoy.

**Make Connections**

How can people learn to respect butterflies? ESSENTIAL QUESTION

Talk about some butterflies you’ve seen. How are they alike and different? TEXT TO SELF

**TOEFL Junior:**

unaware (aware)

decrease

generations (generation)

illegal

**TOEFL:**

unaware (aware)

blend

chilly(chill)

dedicate

desert

diagram

endangered (endanger)

extinct

inhabit

traits (trait)

liquid

monarch

preserve

risk

survive

taste

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 5

**The Camping Trip**

We roughed it at old Piney Park,

With tents and hot dogs after dark.

I’d barely yawned and gone to sleep,

When I felt something creep, creep, creep.

A slimy something crawled on me,

Across my toe, up to my knee.

**Ridiculous**! Hard to believe,

That creature **slithered** up my sleeve.

It was not **humorous** or fun.

I hollered “Rattlesnake! Let’s run!”

We all jumped up and stomped around,

Our tent collapsed flat on the ground.

Ten flashlights clicked on to reveal,

That creepy crawly by my heel.

I blushed bright red, ‘Oops, I was wrong.”

Snake?

No, a lizard--one-inch long.

--Constance Andrea Keremes

**Bubble Gum**

I bought a pack of bubble gum,

As I do every week,

Unwrapping 10 or 20 sticks,

I popped them in my cheek.

I started masticating,

That’s a fancy word for chew,

The gum became a juicy gob,

I took a breath and blew.

I suddenly inflated,

Puffing up like a balloon,

I was a giant bubble,

Big and round as a full moon.

My father hit the ceiling,

He was really in a stew,

He hollered, ‘Stop! Don’t go!”

As out the door I flew.

The neighbors’ eyes were popping.

They dropped everything to see.

I was the **entertainment** of the day.

Forget about TV.

If you like bubble gum, beware--

Chew just one stick a day,

Or you’ll become a bubble, too

And float up Up AWAY!

I saw my friends below me,

And let loose a mighty roar.

WHOOSH!

All my air blew out,

And I was just a kid once more.

**--Diana Kent**

**Make Connections**

Which poem made you laugh? Talk about what funny thing happens in each of the poems. ESSENTIAL QUESTION

Which poem has the funniest events or characters? TEXT TO SELF

**TOEFL Junior:**

entertainment

giant

ridiculous

sticks(stick)

**TOEFL:**

collapsed (collapse)

barely (bare)

characters (character)

entertainment (entertain)

humorous(humor)

loose

mighty

reveal

ridiculous

slimy(slim)

sticks (stick)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

**Wonders G4**

Unit 1 Week 1

The Dragon Problem

Once upon a time, long before computers, baseball, or pizza, there lived a young man named Liang. During the day, Liang helped his father build furniture. At night, he made unique, original toys for the children in the village. He made birds with flapping wings. He carved dragons with rippling, moving scales, sharp claws, and red eyes. Every child in the village had one of Liang’s dragons.

Liang knew a lot about dragons because one lived nearby on a mountain. A few times a year, the dragon would swoop down on the village. He ate water buffalo, pigs, and any people unlucky enough to be around. The Emperor had done nothing to get rid of the dragon even though his summer palace was near Liang’s village.

One day in May, the Emperor and his family arrived to take up residence at his summer palace. As the procession passed through the village, the gracious Princess Peng smiled kindly at Liang. He fell instantly in love.

At dinner that night, Liang told his father that he wanted to marry Princess Peng. His father almost choked on the stale, hard rice ball he was eating.

“You’re joking,” his father said when he finally could speak.

“I’m serious!” insisted Liang.

His father began laughing so hard that the old chair he was sitting on broke. He lay on top of the flattened chair still laughing.

“I’ll show him,” Liang muttered angrily as he stomped out of the room.

The next morning, the Emperor’s messenger made an official announcement.

***“His Most Noble Emperor proclaims that whoever gets rid of the dragon will marry his daughter. Princess Peng.”***

When he heard the announcement, Liang raced to the palace to be the first to sign up. Then he looked for his friend Lee to help him brainstorm ideas for getting rid of the dragon. Unfortunately, Lee was away. Liang sat on a bench frowning. Nearby, children were playing with the toy dragons he had made them.

“Liang, what’s wrong?" the children asked.

“I have to get rid of the dragon on the mountain,” he told them.

“I have an idea, said little Ling Ling. “Why don’t you carve a giant dragon and leave it by the cave? It will alarm the real dragon and scare him into flying away.”

Liang stared at her. “Perfect!” he shouted and rushed home. He worked frantically for days making a huge, scary dragon’s head. The night he finished, he loaded it onto a cart and went up the mountain. When he got near the cave, Liang put the wooden head on top of a big rock. From the front, it looked like the rest of the dragon’s body was behind the rock.

Liang hid in the bushes and gave a loud roar. “What’s that noise?” growled the dragon rushing out of his cave. Then he saw the massive dragon head glaring at him. “Go away, or I’ll eat you up,” he commanded.

The huge dragon continued to glare at him. “He must be very strong. He’s not afraid of me,” thought the dragon, who, like all bullies, was a coward. He decided that now was a good time to take a long trip.

“Actually, I’m leaving now. Please make yourself at home in my cave,” the dragon called out as he flew away.

A year later, Liang and Princess Peng were married. They opened a toy shop together and lived happily ever after.

Make Connections

Talk about where Liang’s idea for scaring the dragon came from. ESSENTIAL QUESTION

Tell about a time when a friend helped you think of a good idea. TEXT TO SELF

**TOEFL Junior:**

continued (continual)

during (duration)

giant

massive

race

scale

stale

unique

**TOEFL:**

announcement(announce)

choked (choke)

unfortunately (fortunate)

frowning (frown)

furniture

glaring

gracious

insisted (insist)

unique

massive

original

procession

proclaims (proclaim)

scale

scare

serious

sharp(sharpen)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 2

The Talent Show

“Tina, there’s a school talent show in three weeks,” I shouted to my best friend. My older brother had been teaching me juggling, and I knew he’d help me with my act for the show.

Tina ran over to the bulletin board and read the poster. “Maura, whales our act going to be?” Tina asked me.

“Our act?” I said, taking a tighter grip on my books.

Tina grinned, pointed to the poster and said “It says acts can be individuals, partners, or small groups.”

My grip on my books became uncomfortably tight. “You want to do an act together?”

“It’ll fee fun,” Tina said.

I hesitated for a second before continuing. “I’ve got an idea and...”

Tina interrupted me. “Yeah, me too; let’s talk at lunch.”

During math, I tried to think of how I would tell Tina that I wanted to do my own act.

After all, we are best friends; we should be able to see eye to eye about this. The problem is Tina always takes charge, I don’t speak up, and then I end up feeling resentful about the whole situation.

I desperately wanted to win, but it was more than that. I wanted to win on my own ---- with an act that was all mine.

At lunch, Tina started talking as soon as we sat down. “I have it all planned out. My inspiration came from that new TV show, ‘You’ve Got Talent.’ We can sing along to a song and do a dance routine, and my mother can make us costumes.”

“Yeah, that’s good,” I said.

“But I had another idea.” I told her about my juggling act.

Tina considered it. “Nah, I don’t think I can learn to juggle in three weeks and I’d probably drop the balls,” she said. “We don’t want to be humiliated, right?”

At recess, I ran around the track a couple of times just to let off steam.

When my grandmother picked me up after school, she drove a few minutes and finally said, “Cat got your tongue?”

I explained about the talent show as she listened carefully. “So, Tina is not being respectful of your ideas, but it sounds as if you aren’t either.”

“What?” I shouted. “I told Tina her idea was good.”

“No,” said my grandmother, “I said that you weren’t respectful of your *own* ideas, or you would have spoken up. I understand that you’re friends, but you’re still accountable for your own actions.”

I thought about this. “So what should I do?” I asked.

“I advise you to tell the truth,” she said. “It wouldn’t hurt to let Tina know what you want. Besides,” my grandmother added, “it will be good for your self-esteem!”

When we got home, I took 12 deep breaths, called Tina, and told her that I was going to do my juggling act. She was curt on the phone, and I spent all night worrying she would be mad at me.

The next day, she described her act and her costume. But the biggest surprise came at recess, when we played a game that I chose, not Tina.

I guess standing up for myself did pay off.

Make Connections

Talk about how Maura was affected by Tina’s actions. ESSENTIAL QUESTION

Tell about a time when someone wouldn’t listen to your ideas. What did you do? TEXT TO SELF

**TOEFL Junior:**

advise

continuing (continual)

drove (driver)

during (duration)

hesitated (hesitate)

individuals (individual)

**TOEFL:**

affected (affect)

accountable (account)

advise

charge

costumes (costume)

curt

esteem

grip

hesitated(hesitate)

humiliated(humiliate)

interrupted (interrupt)

resentful (resent)

routine

talent

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 3

A World of Change

Earth may seem as if it is a large rock that never changes. Actually, our planet is in a constant state of change. Natural changes take place every day. These activities alter the surface of Earth. Some of these changes take place slowly over many years. Others happen in just minutes. Whether they are slow or fast, both kinds of changes have a great effect on our planet.

**Slow and Steady**

Some of Earth’s biggest changes can’t be seen. That is because they are happening very slowly. Weathering, erosion, and deposition are three natural processes that change the surface of the world. They do it one grain of sand at a time.

Weathering occurs when rain, snow, sun, and wind break down rocks into smaller pieces. These tiny pieces of rock turn into soil, but they are not carried away from the landform.

Erosion occurs when weathered pieces of rock are carried away by a natural force such as a river. This causes landforms on Earth to get smaller. They may even completely collapse over time. The Grand Canyon is an example of the effect of erosion. It was carved over thousands of years by the Colorado River.

After the process of erosion, dirt and rocks are then dropped in a new location. This process is called deposition. Over time, a large collection of deposits may occur in one place. Deposition by water can build tip a beach. Deposition by wind can create a substantial landform, such as a sand dune.

Although erosion is a slow process, it still creates problems for people. Some types of erosion are dangerous. They can be seen as a hazard to communities.

To help protect against beach erosion, people build structures that block ocean waves from the shore. They may also use heavy rocks to keep the land from eroding. Others grow plants along the shore. The roots of the plants help hold the soil and make it less likely to erode.

Unfortunately, people cannot protect the land when fast natural processes occur.

**Fast and Powerful**

Fast natural processes, like slow processes, change the surface of Earth. But fast processes are much more powerful. They are often called natural disasters because of the destruction they cause. Volcanic eruptions and landslides are just two examples.

Volcanoes form around openings in Earths crust. When pressure builds under Earth’s surface, hot melted rock called magma is forced upwards. It flows up through the volcano and out through the opening. Eruptions can occur without warning. They have the potential to cause a crisis in a community.

Like volcanic eruptions, landslides can happen without warning. They occur when rocks and dirt, loosened by heavy rains, slide down a hill or mountain. Some landslides are small. Others can be quite large and cause severe damage.

**Be Prepared**

In contrast to slow-moving processes, people cannot prevent the effects of fast-moving natural disasters. Instead, scientists try to predict when these events will occur so that they can warn people. Still, some disasters are unpredictable and strike without warning. It is important for communities to have an emergency plan in place so that they can be evacuated quickly.

The surface of Earth constantly changes through natural processes. These processes can be gradual or swift. They help to make Earth the amazing planet that it is!

Make Connections

Talk about different ways that people prepare for natural disasters. ESSENTIAL QUESTION

How can you help others who have been in a natural disaster? TEXT TO SELF

**TOEFL Junior:**

completely (complete)

constantly (constant)

deposits/ deposition (deposit)

destruction (destructive)

grand

severe

slides(slide)

**TOEFL:**

alter

collapse

amazing (amaze)

block

completely (complete)

cone

constantly (constant)

contrast

crust

deposits/ deposition (deposit)

destruction (destructive)

diagram

effect

erode/erosion

eruptions (erupt)

grand

hazard

planet

potential

pressure

prevent

processes (process)

severe

steady

substantial

swift

volcanoes (volcano)

weathered (weather)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 4

The Big Race

Alex and Liam planned to build a car for the soap box derby. As a result of their inquiry into how to build a fast car, they had come to the science museum today for answers. Last week, Alex’s mother had called one of the museum’s scientists. When they walked into the museum, a woman in a lab coat and inline skates zoomed up and greeted them.

“Hi, I’m Clara. Are you the boys who want to know what will make a car go fast?”

“Yes, I’m Alex, and that’s Liam,” Alex responded.

“Why are you wearing inline skates, Clara?” Liam asked.

“I’m a champion skater!” Clara claimed, doing a spin. Then she whispered, “That’s not my true identity. I’m a scientist. Skates make it easier to get around. Follow me!”

**IT’S ABOUT SPEED**

“Welcome to our On the Move exhibit,” Clara announced as they entered a large room. “So, tell me about the race.”

“There will be 20 cars in the race. We’ll be going down the steepest hill in town!” Alex said

“Sounds thrilling! It must be exciting to go fast!” Clara answered as she pressed buttons on a machine. “This is a virtual race car, and this screen shows you the virtual race course and your speed. Speed is the distance an object moves in a certain amount of time.”

**FORCES AT WORK**

Alex and Liam climbed into the machine. Each seat had a steering wheel and a screen in front of it.

Clara said, “Since you want to build a fast car, you need to know about forces and how they affect motion.”

“What’s a force?” asked Liam.

Clara continued, “A force is a push or a pull. Forces cause things to move or cause a change in motion. When I apply a big enough force on an object, like this stool, it moves. If two objects are exactly the same, the object that receives a bigger force will accelerate, or increase its speed,” Clara said, pushing two stools at the same time.

“Which stool received a bigger force?” Clara asked.

“The one on the right. It went farther,” said Liam.

“So, giving our car a big push at the top of the hill will cause it to accelerate and go faster.” Alex summarized.

**GRAVITY AND FRICTION**

Clara smiled, “Right! Another force acting on your car is gravity. Gravity is a pulling force between two objects.” Clara took a tennis ball out of her pocket. “When I drop this ball, gravity pulls it towards the floor. It’s the same force that pulls your car down the hill.”

“So, a big push gives us an advantage over other cars, and gravity will keep us going. How do we stop?” Liam asked.

“You’ll need friction. Friction is a force between two surfaces that slows objects down or stops them from moving. For example, I lean back on my skates, and the friction between the rubber stoppers and the floor slows me down,” said Clara.

“Thanks, Clara! The virtual race car was cool! I knew we had the skills and capabilities to win the race, but now we have science on our side, too,” Liam grinned.

Make Connections

Talk about ways that science can help you understand how objects move. ESSENTIAL QUESTION

How can science help you understand your favorite activities? TEXT TO SELF

**TOEFL Junior:**

apply

continued (continual)

entered (entry)

motion

race

virtual

**TOEFL:**

affect

accelerate

announced(announce)

apply

champion

entered (entry)

exhibit

friction

gravity

identity(identify)

inquiry

motion

screen

sharp(sharpen)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 5

Dollars and Sense

**Behind the success of these big businesses is a desire to help others.**

Good business is not always about the bottom line. A compassionate company knows that making money is not the only way to measure success. Many large businesses in the United States and all over the world are finding unusual ways to help people in need.

**Hearts and Soles**

After starting and running four businesses, Blake Mycoskie wanted a break from his usual routine. In 2006, he traveled to Argentina, in South America, and while he was there he learned to sail and dance. He also visited poor villages where very few of the children had shoes. Mycoskie decided he had to do something. “I’m going to start a shoe company, and for every pair I sell, I’m going to give one pair to a kid in need.”

For this new undertaking, Mycoskie started the business using his own money. He named it TOMS: Shoes for Tomorrow. The slip-on shoes are modeled on shoes that are traditionally worn by Argentine workers.

Mycoskie immediately set up his innovative one-for-one program. TOMS gives away one pair of shoes for every pair that is purchased. Later that year, Mycoskie returned to Argentina and gave away 10,000 pairs of shoes. By 2011, TOMS had donated over one million pairs.

The company has expanded to sell eyeglasses. In a similar program, one pair of eyeglasses is donated for every pair that is bought.

Mycoskie is pleased and surprised. “I always thought I would spend the first half of my life making money and the second half giving it away,” Mycoskie says. “I never thought I could do both at the same time.”

**Giving Back Rocks!**

Have you ever seen a Hard Rock Cafe? The company runs restaurants and hotels. In 1990, the company launched a new enterprise: charity. Since then, it has given away millions of dollars to different causes. Its motto is Love All, Serve All.

One way the company raises funds for charity is by selling a line of T-shirts. The process starts with rock stars designing the art that goes on the shirts. Then the shirts are sold on the Internet. Part of the money that is raised from the sales of the shirts is given to charity.

Employees at Hard Rock Cafe locations are encouraged to raise money for their community. Every store does it differently.

The restaurant in Hollywood, Florida, worked with some exceptional students from two Florida high schools. Together, they put on an event to raise money for the Make-A-Wish Foundation. The foundation grants wishes to children with serious medical problems.

**The Bottom Line**

Every day companies are thinking of innovative ways to give back to their community. If you own a business, making a profit is important. However, helping others is just as important as the bottom line. Helping others is good business!

Make Connections

How do the two companies profiled in this article help others? ESSENTIAL QUESTION

If you owned a business, how would you use some of your profits to help others? TEXT TO SELF

**TOEFL Junior:**

committed (commit)

expanded (expand)

grants (grant)

high (height)

individuals (individual)

Internet

slip-on(slip)

undertaking(undertake)

**TOEFL:**

committed (commit)

article

charity

designing (design)

donated (donate)

employees (employee)

enterprise

exceptional (exception)

expanded(expansive)

funds (fund)

immediately(immediate)

undertaking

launched (launch)

process

purchased (purchase)

raised/ raises (raise)

routine

soles (sole)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 1

The Fisherman and the Kaha Bird

Long ago there lived an old fisherman who made his pitiful living catching fish. All day the old man sat on the riverbank waiting for the fish to bite. But he never had more than one or two small fish to sell at the market. He and his wife were always hungry.

One morning, the tired old fisherman trudged slowly to the river. Suddenly a great bird with bright, dazzling silver feathers settled in the tree above him. The delighted fisherman knew this was the magnificent Kaha, a glittering bird that occasionally appeared to help the poor or the sick.

“I see you work for very little reward,” the Kaha said. “I wish to help. Every day I will bring a large fish to your house that you can sell at the market.”

The old man couldn’t believe his luck As the days passed, the honest Kaha kept her promise. The fisherman sold the fish and came home with plenty of food. Soon he was bringing home clothing made from brightly colored silk fabric for his wife.

At the market one day, the Shah’s crier made an announcement: “Find the great Kaha for our eminent Shah and receive a reward of fifty bags of gold!”

The fisherman thought, “If I had fifty bags of gold, I would be rich! But how can I betray the bird?” He argued with himself until, finally, his greed for gold blinded him to the generosity of the Kaha bird.

He told the Shah’s crier about the Kaha and requested assistance in catching her. He asked for four hundred men to help him.

That evening, four hundred servants followed the fisherman home. They hid among the trees as the fisherman set out a feast to tempt the bird. When the Kaha landed in a tree, the old man said, “Come dine with me, dear friend. I wish to express my gratitude.”

The Kaha, touched by the fisherman’s kindness and attracted to the delicious meal, flew down to join him. Immediately, the fisherman grabbed the Kaha by the feet and cried out to the servants to help him. The startled Kaha spread her wings. She began to fly up with the fisherman pulling at her. A servant caught the fisherman by the feet, but the bird rose higher. A second and third servant grabbed onto the first until soon four hundred servants hung by one another’s feet as the Kaha soared upward.

Looking down, the fisherman could just barely see the river below. If he hadn’t betrayed the Kaha, he would not be in this predicament. There was but one thing to do. The fisherman let go of the great bird’s feet. The servants and the fisherman tumbled from the sky and landed in the river.

It was many weeks before the fisherman had healed enough to fish again. Every day the old fisherman looked up at the sky for a sign of the beautiful silver bird, but the Kaha was never seen again.

Make Connections

Talk about the message in this Story. ESSENTIAL QUESTION

What would you tell the fisherman to convince him not to betray the Kaha bird? TEXT TO SELF

**TOEFL Junior:**

gratitude

higher (height)

tempt(temptation)

**TOEFL:**

assistance (assist)

announcement(announce)

barely (bare)

betray

dazzling

delicious

eminent

grabbed (grab)

gratitude

healed(heal)

immediately(immediate)

trudged (trudge)

landed (land)

magnificent

occasionally (occasional)

pitiful

sick

startled (startle)

tempt

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 2

The Ant and the Grasshopper

SEETING

On the African grasslands. he present.

CHARACTERS

Termite (the narrator)

Ant

Grasshopper

An army of ants

**Scene I**

*(It is raining heavily on the African grasslands. Termite turns and sees the audience.)*

**TERMITE:** (*Happily*) Yipes! I didn’t see you. Welcome to the great plains of Africa! We’re soggy now because it’s the rainy season. Sorry. (*She shrugs and smiles*.) Today, we’ll visit two very different friends of mine ---- Ant and Grasshopper. Maybe you have heard of them from other familiar stories. Let’s see what my buddies are up to!

*(An army of ants march in, carrying leaves filled with water. They approach Grasshopper, who lounges lazily under a plant)*

**ANT:** (*In a loud voice*) Company, halt! (*The ants stop*.)

**GRASSHOPPER:** (*Stretching and yawning*) Ant, old pal! Good to see you! I was just napping when I heard your feet pounding down the way. What’s all the commotion?

**ANT:** (*Looking annoyed*) Grasshopper, have you noticed what falls from the sky above you?

*(Ant stands at attention and points up at a cloud. Grasshopper sleepily rises and stands next to Ant. He looks at the sky.)*

**ANT:** Rain, Grasshopper! Rain falls from the sky! And when there is rain, there is work to be done.

**GRASSHOPPER:** (*Smiling then scratching his head*) Huh?

**ANT:** (*Sighing*) You should be collecting water for a time when it is unavailable. Instead, you lie here without a care for the future.

**GRASSHOPPER:** (*Laughing*) Oh, don’t be so serious, ol’ buddy! There is plenty of water now, and that’s all that matters. You need to relax! You’re much too tense. Why don’t you make napping your new specialty instead of all this silly toil? Stop working so hard all the time!

**ANT:** (*Shaking his head as he grows frustrated*) The rainy season will not last forever, Grasshopper. Your carefree attitude will disappear with the water, and soon you will regret being lazy and wish you had been more energetic.

*(The ants march off as Grasshopper continues to laugh.)*

**Scene II**

*(It is a few months later, and the plains are now dusty, dry, and brown. Grasshopper, appearing weak and sickly, knocks on Ant’s door. Ant, seeming strong and healthy, opens the door.)*

**GRASSHOPPER:** (*Nervously*) Hi there, pal... I was in the neighborhood. Boy, can you believe how hot it is? So... uh... I was wondering if maybe... by chance... you might have some water for your old friend.

*(Ant tries to close the door, but Grasshopper quickly grabs it)*

**GRASSHOPPER:** (*Begging wildly*) PLEASE, Ant! I am so thirsty! There isn’t a drop of water anywhere!

**ANT:** (*After a pause*) We ants worked hard to collect this water, but we cannot let you suffer. (*Giving Grasshopper a sip of water*) Do not think us selfish but we can only share a few drops with you. I warned you that this time would come. If you had prepared, you would not be in this situation.

*(Grasshopper walks slowly away. Termite watches him go.)*

**TERMITE:** Although Ant has done a good deed, tired, cranky Grasshopper must still search for water. Grasshopper learned an important lesson today. Next time, he will follow Ant’s advice!

Make Connections

Talk about how Ant and Grasshopper act like real people. ESSENTIAL QUESTION

Explain why you are more like Ant or more like Grasshopper. TEXT TO SELF

**TOEFL Junior:**

advice

approach

unavailable (available)

continues (continual)

**TOEFL:**

approach

availability (available)

advice

annoyed(annoy)

disappear(appear)

audience

characters (character)

energetic

familiar(familiarize)

frustrated (frustrate)

grabs (grab)

halt

narrator

nervously (nervous)

scratching (scratch)

selfish

sickly (sick)

sighing (sigh)

silly

tense

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 3

Rescuing Our Reefs

Sitting on the side of the boat, the photographer fixes her scuba tank and mask. She waves to a man in a fishing boat. Then she dives backwards into the clear waters of the Florida Keys. She swims, breathing through her regulator. A large, colorful coral reef is laid out before her eyes. Sea anemones, red hind fish, gaudy parrotfish, yellow angelfish, and other animals ignore her as they go about their business. Life in this reef has and grown.

**Connections**

The photographer knows the plants and animals in a reef ecosystem need each other to survive. Reefs are made up of billions of tiny animals called coral polyps. Plant­like algae live inside the coral. The algae use a process called photosynthesis to turn energy from the sun into food for themselves and the coral. In return, the coral gives the algae a home and the carbon dioxide needed for photosynthesis. Algae are a part of the food chain called producers. Producers make their own energy.

The photographer sees a blue and yellow parrotfish nibbling at the coral. She takes a picture. The parroifish breaks apart the coral to get to the algae- filled polyps inside. In a food chain, the parrotfish is a consumer. Consumers cannot produce their own energy. As the parrotfish eats the algae, energy is passed through the food chain.

In the distance, the photographer notices the long silver body of a barracuda lurking. The sea grass ripples in the current, swaying back and forth. It almost hides the hungry predator. She snaps a photo and swims on.

**Coral Bleaching**

The photographer shoots more photos as she swims. The reef must have looked like this hundreds of years ago. But then she stops and stares at a big area of bleached, white coral. Once colorful, the whitish coral now looks like the broken pieces of a crumbled castle.

Coral depends on a natural balance to stay healthy. Climate change and pollution can cause an imbalance. Some areas have dried up from droughts while others have had more rain. Too much sun and warmer ocean temperatures can cause coral bleaching.

If pollution gets into the water or the water gets too warm, the relationship between the coral and algae breaks down. The algae stop making food. The coral ejects the algae. The algae are what give the coral its color. The coral loses its color. It starves because it needs the algae to make food for it.

Many plants and animals depend on the coral for food and shelter. As more and more coral reefs die, many animals and plants that live in these reefs may become extinct. The beautiful reef the photographer had seen earlier would resemble the white, crumbling reef before her.

**Balancing Act**

She turned and swam back to the boat. Later today, she would send her photographs to the Nature Conservancy. It is an organization that works to rescue our fragile reefs. Scientists there are trying to rebuild the reefs by attaching small pieces of staghorn coral to concrete blocks. Staghorn coral is used to grow new coral. Once the coral grows, the blocks are planted in the reefs.

The photographer hopes her pictures will help spread the word. They show the relationship between pollution, climate change, and coral bleaching. She breaks through the water’s surface and climbs into the boat.

“I got some good shots of the healthy reef and the sick reef !” she shouts to her partner. Once aboard, she immediately begins putting her photos on her laptop.

Make Connections

Talk about how the plants and animals that live in the coral reef are connected. ESSENTIAL QUESTION

What could you do to help save the coral reefs? TEXT TO SELF

**TOEFL Junior:**

attaching (attach)

conservancy (conservation)

consumer/ consumers (consume)

dives (dive)

snaps (snap)

starves (starvation)

**TOEFL:**

attaching(attach)

backward

balance

bleached (bleach)

blocks (block)

carbon

climate

concrete

conservancy

consumers (consumer)

crumbled (crumble)

current

droughts (drought)

ejects (eject)

extinct

fixes(fixed)

forth

fragile

ignore

immediately(immediate)

lurking (lurk)

pollution

process

rescuing (rescue)

resemble

save

sick

snaps (snap)

starves (starve)

survive

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 4

Animal Adaptations

What would you do if you saw a skunk raise his tail? If you knew anything about skunks, you would run in the opposite direction! Skunks have a built-in survival system. They can blast a predator with a horrible-smelling spray produced by the glands under their tails.

The special ways that animals have to survive are called adaptations. These include physical traits such as the skunk’s spray and animals with bright colors and markings that warn predators that they are poisonous. Some animals can sense the smallest vibrations in the ground. Others hear sounds from miles away. An adaptation can also be a behavioral trait. An example of a behavioral trait would be birds that migrate south every winter to avoid harsh temperatures.

**Staying Warm**

Brrrr! Imagine living in a place where the average annual temperature is an extraordinary 10 to 20°F. Welcome to the Arctic tundra of Alaska, Canada, Greenland, and Russia, home of the caribou. To stay warm, caribou have two layers of fur and a thick layer of fat. They also have compact bodies. Only 4 or 5 feet long, caribou can weigh over 500 pounds.

The tip of the caribou’s nose and mouth is called a muzzle. It is covered in short hair. This hair helps to warm the air before they inhale it into their lungs. It also helps to keep them warm as they push snow aside to find food.

**Finding Food**

Every day, a caribou eats over six pounds of lichen! Caribou have unusual stomachs. The stomach’s four chambers are designed to digest lichen. It is one of the few foods they can find in the winter. Even so, caribou still have a tough time in the coldest part of winter when their food sources decline. That’s why they travel from the tundra to a large forest area, where food is easier to find. When the melting snow dribbles into streams, they know that it is time to return up north.

**Insects in Disguise**

Look closely at the photo of the tree branch. Can you spot the insect? It is a phasmid. Some phasmids are known as leaf insects, or walking sticks. Phasmids look like leaves or twigs. These insects can change colors to really blend in with their surroundings. In this way, they are camouflaged from predators. Ifs as if they disappear from sight! These insects are nocturnal, which means that they are active at night. This is another adaptation that helps them avoid predators. It’s hard to spot these insects in daylight, let alone at night.

**Water, Please!**

In Florida’s vast Everglades ecosystem, the dry season is brutal for many plants and animals. Alligators have found a way to survive these dry conditions in the freshwater marshes. They use their feet and snouts to clear dirt from holes in the limestone bedrock. When the ground dries up, the alligators can drink from their water holes.

Other species benefit from these water holes, too. Plants grow there. Other animals find water to survive the dry season. However, the animals that visit alligator holes become easy prey. The normally motionless alligator may pounce on them without warning. But luckily, alligators eat only a few times each month. Many animals take their chances and revisit the alligator hole when they need water. In the end, ifs all about survival!

Make Connections

How do adaptations help an animal survive? ESSENTIAL QUESTION

Describe an animal adaptation that you have seen. TEXT TO SELF

**TOEFL Junior:**

adaptation/ adaptation (adapt)

avoid

blast

decline

extraordinary

horrible

motionless (motion)

extraordinary (ordinary)

spotting (spot)

sticks (stick)

vibrations (vibrate)

**TOEFL:**

adaptations (adapt)

benefit

annual(annually)

disappear(appear)

avoid

blast

blend

brutal

compact

decline

designed (design)

foul

harsh

traits (trait)

twigs (twig)

limestone

motionless(motion)

nocturnal

raise

smelling (smell)

spotting (spot)

sprays (spray)

sticks (stick)

survive

vast

vibrations (vibrate)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 5

Dog

THE EAGLE

He clasps the crag with crooked hands;

Close to the sun in lonely lands,

Ring’d with the azure world, he stands.

The wrinkled sea beneath him crawls;

He watches from his mountain walls,

And like a thunderbolt he falls.

----Alfred, Lord Tennyson

CHIMPANZEE

From branch to branch on outstretched arms,

From tree to ground I leap.

When I want to eat a snack,

I stick a stick in termite heaps.

I use my teeth to rip off leaves

And make the branch all bare,

Then find the hole the bugs come out

And patiently wait there.

My skinny branch becomes a bridge,

As brittle bugs climb up the stick.

I pick them off one by one

And crunch them like potato chips!

---Ellen Lee

Rat

Teeth like jackhammers,

I chew through concrete for fun,

bring the outdoors in!

---Rosa Sandoval

Make Connections

Talk about the creative ways that the poets portray animals. ESSENTIAL QUESTION

What animal would you write a poem about? Why? TEXT TO SELF

**TOEFL Junior:**

stick

**TOEFL:**

bare

brittle

concrete

crooked

patiently(patient/ impatient)

portray

stick

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 1

At the Library

Rick Dodson admired the pink and orange sky as he waved good-bye to Mrs. Rio and locked the library door. As the sun began its descent behind the Blue Ridge Mountains, Rick started walking to his office to collect his jacket. Seeing a jumble of books on a reading table, he sighed and began to gather them into a neat pile.

“No,” he stated firmly, and returned the books to the table. “Not tonight.”

The librarian never left any books out, but today was his birthday, which meant a brisk walk to the Cupcake Café for a birthday treat before it closed at 5:30 P.M.

That evening, as he sat at home in his book-filled living room, Rick thought about the old friends who had called to wish him a happy birthday. If only this job had not required him to move halfway across the country... After six months here, he had made more than one new acquaintance but no real friends yet.

“Books are my friends,” he thought, which reminded him of the books sitting on the table at the library. “I might as well go back tonight and shelve them,” he decided.

He entered the library and flicked on the lights. Immediately, he noticed a book, *Small World*, face down on the floor. “What’s going on?” he muttered as he bent down and cautiously lifted up the book “Ahhh,” he yelled and dropped the book.

Four miniature figures scrambled out of the way as the book landed on the floor with a thud.

“Mr. Dodson,” exclaimed a breathless voice, “we are enchanted to make your acquaintance.”

“What... who...” Rick stammered.

“We’re the Bookers! I’m William. This is Emily and our children, Harry and Clementine. By the way, happy birthday!”

“You know it’s my birthday?”

“Naturally, we read your file when you arrived six months ago. It’s only logical that we would want to learn about the new librarian.”

“You were scrounging through my files?” Rick said, collapsing into a nearby chair. He rubbed his eyes, but the tiny figures were still there ---- looking up at him expectantly.

Suddenly, the nimble Bookers began shimmying up the table. “We’re absolutely trustworthy.” Emily assured him.

“Haven’t you heard of Bookers?” William asked “Every library has Bookers!”

“We ensure everything runs smoothly,” said Emily. “Seen any mice around? They love to gnaw on everything.”

Rick slowly shook his head.

“I do nightly rodent patrols,” Harry stated proudly. “Those mice run at the sight of me,” he added scornfully.

“Do your chairs ever squeak?” inquired Clementine. “No! That’s because we oil them!”

Rick considered the past six months. He hadn’t seen one mouse, his chairs never squeaked, and his pencils were never dull.

“The pencils?” he asked.

“We sharpen them nightly,” William replied, “But why?” asked Rick.

“Look around!” exclaimed William. “We work and read. Bookers and libraries are complementary. We belong together.”

“To be honest, Mr. Dodson,” said Emily, “we wanted to meet you because we thought that we could be friends.”

Rick Dodson grinned. “Call me, Rick. And I’d love to be friends,” he said.

Rick eventually made other new friends, but he still spent many evenings with the Bookers. He bought a toy car for Harry's rodent patrol, and he read scary stories aloud to Clementine. Every year on his birthday, he brought cupcakes for his friends to share with him.

Make Connections

Talk about how the Bookers made Rick Dodson feel welcome. ESSENTIAL QUESTION

How do you make new students in your school feel welcome? TEXT TO SELF

**TOEFL Junior:**

cautiously (caution)

entered (entry)

exclaimed (exclaim)

treat

**TOEFL:**

assured (assure)

absolutely (absolute)

admired (admire)

bent

brisk

cautiously (cautious)

complementary (complement)

enchanted (enchant)

eventually (eventual)

exclaimed (exclaim)

firmly(firm)

flicked(flicker)

gnaw

immediately(immediate)

jumble

logical

meant (mean)

nimble

reminded (remind)

scornfully (scornful)

sharpen (sharp)

sighed (sigh)

squeaked (squeak)

yelled (yell)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 2

Remembering Hurricane Katrina

Leaning over my steering wheel, I watched the heavy clouds roll in. The sky became a darker shade of gray, and raindrops were soon scattered across my windshield. A storm was coming. Glancing at the boxes of clothes stacked in the backseat, I smiled to myself.

A torrential downpour of rain began beating against my windshield as lightning flickered across the sky. I pulled the car off the road until my driving visibility improved. People on the sidewalk held purses and briefcases over their heads in a futile effort to keep from getting wet. Children screamed and danced around in the downpour. The rain reminded me of another storm ten years earlier.

Hurricane Katrina slammed into the Gulf Coast of the United States when I was nine years old. The ferocious storm caused untold amounts of damage.

One of my strongest memories from that time was watching the evening news with my aunt. A reporter stood inside the Houston Astrodome, surrounded by thousands of people. They all shared the same weary expression. Many wore tom and dirty clothes, and some had no shoes on their feet. They slowly shuffled along, their faces full of sadness.

“Are they here because of the hurricane?” I asked softly.

Aunt Lucia nodded. “*Si*, Hector. These people are from New Orleans, Louisiana. Just a few days ago, Hurricane Katrina destroyed their homes and possessions, and they lost everything they owned, so now they are temporary residents of the Astrodome. It’s a place for them to stay until it's safe to go home.”

I knew a lot about Katrina. The storm had formed in hot and humid tropical weather and then traveled north. It had come so close to Texas that I worried it would strike us in Houston. It missed us, but other cities were not so lucky.

The TV news reporter looked around. People tried to speak to her, but she was being selective about whom she wanted to interview. I noticed a little boy sitting behind her on a cot, hugging an old teddy bear. Watching him, I knew I had to do something.

The next day, my friends joined me at our volunteer club ---- the Houston Helpers ---- and together we devised a plan. We wanted to collect toys and give them to the kids at the Astrodome because donating the toys would help bring some happiness into the lives of these families.

Anxious to get started, we made lists of what we needed to do. Then every one of us was assigned a specific task.

We agreed to spread the word to our schools and other organizations. Three days later, after a Herculean effort on our part, the donation bins were overflowing with new toys!

I’ll never forget the day when we entered the Astrodome with our gifts. Children flew toward us from all directions. Smiles lit up their faces as we pulled toys from our bags. Grateful parents thanked us for our generosity and complimented our group leaders on how thoughtful and mature we all were.

*BZZZZ*. My cell phone jolted me back to the present, and I noticed that the storm had passed.

“Hector?”

“*Si*, yes, hi, Jeannie.”

“Do you have the donations? A few more families have arrived, more victims of yesterday’s tomado.”

“Yes, I have the clothing donations. The storm delayed me, but I’ll be there soon!”

I gingerly eased my car into the suddenly busy traffic. It felt good to know that I was making a difference again.

Make Connections

Talk about how Hector and his friends make a difference in their community. ESSENTIAL QUESTION

What are some things that you have done to help your school or community? TEXT TO SELF

**TOEFL Junior:**

devised (devise)

driving (driver)

entered (entry)

grateful

mature

purse

temporary

volunteer

**TOEFL:**

assigned (assign)

anxious

bear

beating (beat)

complimented (compliment)

delayed (delay)

devised (devise)

entered (entry)

ferocious

flickered(flicker)

futile

grateful (gratitude)

humid

hurricane

jolted (jolt)

nodded (nod)

overflowing (overflow)

reminded (remind)

residents (resident)

roll

scattered (scatter)

selective (select)

shade

windshield (shield)

shuffled (shuffle)

volunteer

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 3

Judy’s Appalachia

Judy Bonds’s six-year-old grandson stood in a creek in West Virginia. He held up a handful of dead fish and asked, “What’s wrong with these fish?” All around him dead fish floated belly up in the water. That day became a turning point for Judy Bonds. She decided to fight back against the coal mining companies that were poisoning her home.

**Marfork, West Virginia**

The daughter of a coal miner, Julia “Judy” Bonds was born in Marfork, West Virginia in 1952. The people of Marfork had been coal miners for generations because coal mining provided people with jobs. Coal gave people the energy they needed to light and warm their homes.

But Marfork wasn’t just a place where coal miners lived. Marfork was home to a leafy green valley, or holler, surrounded by the Appalachian Mountains on every side. Judy’s family had lived in Marfork for generations. Judy grew up there swimming and fishing in the river. She raised a daughter there.

**Mountaintop Removal Mining**

An energy company came to Marfork in the 1990s. It began a process called moimtaintop removal mining. Using dynamite, the company blew off the tops of mountains to get at the large amounts of coal underneath. The process was quicker than the old method of digging for coal underground, but it caused many problems. Whole forests were destroyed.

Dust from the explosions filled the air and settled over the towns. Coal sludge, a mixture of mud, chemicals, and coal dust, got into the creeks and rivers.

Pollution from the mountaintop removal mining began making people living in the towns below the mountains sick. In the area where Judy lived, coal sludge flowed into the rivers and streams. People packed up and left. Judy was heartbroken. The land she loved was being mistreated. She realized that the valley that had always been her home had been poisoned. No longer a safe place to live, it had become dangerous. Judy, her daughter, and her grandson had to leave.

**Working for Change**

Something had to be done about the pollution. Judy decided it was important to protest against strip mining and demand that it be stopped. She felt that she must try to keep the area safe for people. She felt qualified to talk to groups about the injustice of whole towns being forced to move and mountains and forests being destroyed, all because of strip mining. After all, she had grown up in a mining family.

Judy worked as a volunteer for the Coal River Mountain Watch, a group that fought against mountaintop removal mining. Eventually, she became its executive director. She registered to take part in protests against mining companies. At the protests, Judy faced a lot of anger and insults. Many coal miners were not opposed to mountaintop removal mining. They Judy Bonds supported it because they needed the jobs to provide for their families. Judy knew it would be impossible to boycott the mining companies. The coal miners could not afford to leave their jobs. Instead, she pushed for changes to be made to the mining process. Slowly, small changes were made to protect communities in mining areas. In 2003, Judy was awarded the Goldman Environmental Prize for her efforts as an activist.

**Remembering Judy**

Sadly, Judy could not fulfill all of her goals. She was diagnosed with cancer and died in January 2011. But her success has provided encouragement to other activists. Judy may not have been able to stay in her home, but her work will help preserve and protect the Appalachian Mountains and help others remain in their homes.

Make Connections

How did Judy Bonds make a difference? ESSENTIAL QUESTION

What cause do you feel strongly about? TEXT TO SELF

**TOEFL Junior:**

awarded (award)

explosions (explosion)

generations (generation)

provided (provide)

removal

mistreated(treat)

valley

volunteer

**TOEFL:**

bond

afford

amounts (amount)

creeks (creek)

diagnosed (diagnose)

director (direct)

eventually (eventual)

explosions(explode)

insults (insult)

miners (miner)

opposed

pollution

preserve

process

provided (provide)

qualified

raised (raise)

registered (register)

sick

strip

volunteer

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 4

Words for Change

The Early Years

In 1827, when Elizabeth Cady Stanton was eleven, her father said: “Oh, my daughter, I wish you were a boy.” Elizabeth was shattered. From that time on, she became determined to prove to her father and the whole world that women ---- and all people ---- deserve equal treatment.

Elizabeth’s father was a lawyer, judge, and congressman. She would listen eagerly when a woman would come see him for legal advice. But she was often disappointed. Her father could not help them because women did not have the same rights as men did under the law. Married women could not own property or vote. Elizabeth said: “The tears and complaints of the women who came to my father for legal advice touched my heart and early drew my attention to the injustice and cruelty of the laws.”

Elizabeth began drawing lines through all the laws she opposed in her father’s law books. She planned to take a pair of scissors and cut these pages out. Her father had a better idea. He told her that when she was grown up, she must get lawmakers to pass new laws. Then the unfair laws would perish and disappear. Women’s lives would be changed.

**Working for Change**

Elizabeth was as passionate about the rights of African Americans as she was about those of women. At that time, the country was divided in two by the issue of slavery. While working for reform, she met her husband, the abolitionist Henry Stanton. They were married in 1840. Elizabeth refused to use the traditional words “promise to obey” in her wedding vows.

**The Seneca Falls Convention**

Elizabeth tried to settle into the role of wife and mother. But she wanted to be an activist and work for change. She took her father’s advice and wrote a proclamation. It was called the “Declaration of Rights and Sentiments.” Modeled after the Declaration of Independence, it stated that women should be able to vote and have the same rights as men.

She presented this document in 1848 at America's first women’s rights convention in Seneca Falls, New York. Elizabeth and her friend Lucretia Mott organized this important event. In her address at the convention, Elizabeth said,

***Because women do feel themselves... deprived of their most sacred rights, we insist that they have immediate admission to all the rights and privileges which belong to them as citizens of the United States.***

**A Winning Team**

Three years later, Elizabeth met Susan B. Anthony. Together, the two made an unstoppable team. Elizabeth was a passionate speaker and writer. Anthony was a gifted leader and organizer. In 1869, they formed the National Woman Suffrage Association. This group was dedicated to helping women gain the right to vote. Congress showed no haste, or hurry, to change the law. Elizabeth toured the country. She spoke about reforms for women and a women’s right to vote. She did not care if her speeches caused tension and made some people angry. She believed in her cause.

**Victory At last**

Elizabeth Cady Stanton never got to cast a vote before she died on October 26, 1902. Yet her bold words had a lasting impact. Women finally gained the right to vote on August 18, 1920 when the 19th amendment was ratified. Elizabeth Cady Stanton’s passion for equal rights paved the way for future women’s lives to be changed forever.

Make Connections

Talk about how Elizabeth Cady Stanton helped women gain the right to vote. ESSENTIAL QUESTION

Think about a time when you disagreed with something or wanted to change something. What did you say to try to change it? TEXT TO SELF

**TOEFL Junior:**

advice

complaints (complaint)

deserve

divided (divide)

legal (illegal)

issue

parade

treatment (treat)

vote

**TOEFL:**

amendment (amend)

admission (admit)

advice

disappear(appear)

association

attendees(attend)

bold

complaints (complaint)

congressman

congress

convention

cruelty (cruel)

dedicated (dedicate)

deserve

divided (divide)

eagerly (eager)

immediate

impact

insist

issue

treatment (treat)

unfair

lasting

opposed

parade

passionate

privileges (privilege)

ratified (ratify)

reform

reforms (reform)

role

sacred

sentiments(sentimental)

shattered(shatter)

vote

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 5

Food Fight

**Is it safe to interfere with Mother Nature?**

An incredible thing is happening to our food. Some scientists are using a technique called genetic modification to make superior food crops. It involves altering a seed’s genes. Genes are the “instruction codes” that all living things have inside their cells. A seed’s genetic code sets what characteristics it will inherit when it grows into a plant. These could mean how big it will grow and the nutrients it will contain.

For thousands of years, farmers made crops better by crossbreeding plants. They would add pollen from the sweetest melon plants to the flowers of plants that produced the biggest melons. This would make new plants with big, sweet melons. But this process does not always work. The cycle of crossbreeding can take years to get good results.

But advances in gene science have created amazing shortcuts. Using new tools, scientists can put a gene from one living thing into another.

That living thing could be a plant, a bacterium, a virus, or even an animal. These foods are called genetically modified foods, or GM foods. The goal of GM foods is to create foods that can survive insects or harsh conditions or can grow faster. But are these advancements in agriculture good for us?

Support for Superfoods

Scientists believe the new techniques can create crops with a resistance to pests and disease. Bt corn is a genetically modified corn.

It has an insect-killing gene that comes from a bacterium. Farmers who grow Bt corn can use fewer chemicals while they grow their crops. That is good for the farmer and the environment.

Some superfoods are extra nutritious. Golden rice has been genetically modified with three different genes. One gene is a form of bacterium. The other two are from daffodils. The new genes help the rice to make a nutrient that prevents some forms of blindness.

Superfoods

These foods may seem common. But did you know that the genetically modified versions have special powers?

Rice

Rice contains phytic add. Too much of this acid can be bad for people. A new type of rice has been bred with a low level of phytic acid.

Salmon

To create supersized salmon, scientists changed the gene that controls growth. The genetically altered salmon grow twice as fast as their wild cousins.

Tomatoes

Genetically engineered tomatoes can be picked when they are ripe and still not bruise when shipped. One food company tried to use an arctic flounder fish gene to create a tomato that could survive frost. The fish-tomato did not succeed

**Safety Issues**

Many people have disagreed with the idea that GM foods are a good idea. They worry GM foods will hurt the environment and humans. One concern is that plants with new genes will crossbreed with weeds to make pesticide-resistant weeds. Another concern is that GM foods may trigger allergies.

Genetically modified crops are prevalent in the U.S. But some people will not buy them because of health concerns. As a result, many companies avoid GM foods although there is no physical evidence that they are unhealthy.

**Time Will Tell**

Genetically modified foods have not hurt anyone. Most genetic researchers think that if troubles do crop up, they will be manageable. It is important to keep researching GM foods because these types of foods can better fight the world's chronic hunger problems.

Make Connections

Talk about the advantages and disadvantages of GM foods. ESSENTIAL QUESTION

Would you buy GM foods? TEXT TO SELF

**TOEFL Junior:**

avoid

crossbreeding (breed)

bred (breed)

codes (code)

extra

interfere

issues (issue)

resistant/ resistance (resist)

virus

**TOEFL:**

code

acid

advances/ advancements (advance)

altering/ altered (alter)

amazing (amaze)

avoid

crossbreeding (breed)

bruise

characteristics (character)

chronic

concerns (concern)

evidence

flounder

harsh

incredible

instruction (instruct)

interfere

issues (issue)

modification/ modified (modify)

prevalent

prevents (prevent)

process

resistant/ resistance (resist)

ripe

versions(version)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 1

A World Without Rules

You may sometimes wonder if rules were made to keep you from having fun and to tell you what you to do. But what if we had no rules at all? Nobody would tell you what to do ever again! Sounds great, right? Well, let’s see what it's like to inhabit a world without rules. You just might change your mind!

**A Strange Morning**

Let’s start at home. Your alarm clock goes off. Why hurry? Without rules you don\*t have to go to school. Eventually you wander downstairs and find your little brother eating cookies in the kitchen. Since there are no rules, you can have cookies for breakfast! But you wonder if you should have something sensible like a bowl of cereal. You reach a compromise (KOM\*pruh\*mighz) and crumble the cookies over your cereal. In this new world, you will not have to brush your teeth anymore. Of course, the next time you see the dentist, you may have a cavity.

**A Community in Confusion**

Now, you step outside. You decide to go to the playground because there’s no law saying you have to go to school. No crossing guard stands at the corner to help you across the street. Without traffic laws, cars zip by at an alarming speed honking at each other, and there is not a police officer in sight. There is no safe alternate way to cross the street. Besides, once you see the playground, you may decide it is not worth the risk of getting hit by a car. Broken swings dangle from rusty chains. Trash cans overflow with plastic bottles, snack wrappers, and paper bags. A huge tree branch lies across the sliding board. As a result of all state and federal services being gone, nobody is in charge of taking care of the playground.

Now think about trying to do all the other things you love. Want to go to the beach? The lifeguards will not be there to keep you safe. Want to play soccer in the park? Your state and local governments are not around to maintain the parks, so you’ll never find a place to play. Feel like eating lunch outside? As a result of pollution, the air quality is so bad that you will probably have to wear a gas mask every day.

Have you ever thought about our country being invaded by another country? Remember, the government runs the army. Without the government, there is no army to protect us if another country decided to take over our country.

**Back to Reality**

Thankfully, that version of our world isn’t real. We live in a democracy (di\*MOK\*ruh\*see) where we have the privilege (PRIV\*uh\*lij) of voting for the people that we want to run the country. Our elected government passes legislation (lej\*is\*LAY\*shuhn), or laws, meant to help and protect us. If the country outgrows an old law, then the government can pass amendments to the law. Community workers such as crossing guards, police officers, and lifeguards all work to keep you safe, while government agencies such as the Environmental Protection Agency have made a commitment to inspect the air and water for pollution. And don’t forget the armed forces, which were created to protect our nation.

Our government and laws were designed to keep you safe and ensure you are treated as fairly as everyone else. Without them, the world would be a different place.

Make Connections

Talk about how government helps us maintain order and helps preserve our freedom. ESSENTIAL QUESTION

What are some ways that the government protects you everyday? TEXT TO SELF

**TOEFL Junior:**

commitment (commit)

invaded (invade)

legislation

sliding(slide)

treated(treat)

**TOEFL:**

amendments (amend)

commitment (commit)

community

alternate

charge

confusion (confuse)

crumble

dangle

democracy

eventually (eventual)

governments (govern)

inhabit

inspect

invaded (invade)

trash

maintain

overflow

pollution

preserve

quality

sensible

version

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 2

The TimeSpaces 3000

September 15

Dear Grandpa,

I just got back from our class field trip to Washington, D.C, and I have a lot to tell you. Going to Washington helped me decide to run for class president.

I owe it all to your invention, the TimeSpecs 3000! In a nutshell, it helped me get some helpful advice about my problem. I intend to tell you everything when I visit Saturday, but for now I’ve pasted my field notes into this e-mail, so you can understand how well your invention worked.

FIELD NOTES: DAY 1

I use the TimeSpecs 3000 at the Washington Monument. Our guide accompanies us everywhere, and while she’s talking I put on the specs. The design needs tweaking because my friend Ken whispered, “Nerdy shades, dude!”

Immediately, I’m seeing the monument in the past. I am watching the ceremony when they laid the cornerstone in 1848, and everybody’s wearing large hats and funny, old-fashioned clothes. When I take off the TimeSpecs 3000, I realize my class is heading to lunch so I run after them.

FIELD NOTES: DAY 2

We’re back on the National Mall, which is nothing like Brookfield’s mall with all its stores. This mall is outside and has a long reflecting pool. My teacher is finding it hard to tolerate some of my classmates’ immature behavior, which includes running around throwing pebbles in the reflecting pool, rm getting kind of weary of all the noise, and I’d rather learn about history on my own. So I put on the TimeSpecs 3000 and check out the Lincoln Memorial.

I see how dignified Lincoln’s statue looks and wonder if I could ever help people like he did. This starts me thinking again about whether I should run for class president. Suddenly, right out of the blue, I hear this voice. “Excuse me, young man. You’re thinking of running for president?” I look up and realize that Lincoln’s statue is talking to me. It’s so overwhelming that I stand there speechless for a minute.

Finally, I stammer, “President... Lincoln?”

“Maybe you should first run for mayor of your town,” the statue says. “Or perhaps for governor? Once you get the hang of being in public office, you could run for president.”

“Actually, it’s for president of my 4th grade class,” I say.

The giant statue nods. “That’s an excellent start.”

I figure while I have Lincoln’s ear, I should get some advice. “I have a problem. I hate writing and giving speeches, and my opponent, Tommy, is great at both things.”

“What kind of campaign would you run?” Lincoln asks.

“I have lots of ideas for our school,” I tell him. “For instance, I want our school to use fruits and vegetables from the local farmers’ market in the cafeteria. I also want to start a book drive for our school library.”

“There’s your speech,” he says. “Tell people your ideas with honesty, integrity, and enthusiasm, and you can’t possibly go wrong.”

“Thanks, Mr. President,” I say. “I think I can do that!”

Grandpa, I can’t wait to see you on Saturday because I have to tell you about our visit to the Natural History Museum.

Your grandson and future class president,

Miguel

PS. I would advise not wearing the TimeSpecs 3000 while looking at dinosaur bones.

Make Connections

Talk about why Miguel decides to run for class president. ESSENTIAL QUESTION

What would you do for your school if you were class president? TEXT TO SELF

**TOEFL Junior:**

advice

advise

ceremony

drive (driver)

enthusiasm

giant

immature(mature)

opponent

**TOEFL:**

advice

advise

ceremony

check

dignified

enthusiasm

old-fashioned(fashion/ fashionable)

immediately(immediate)

integrity

tolerate

nods (nod)

opponent

shades(shade)

statue

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 3

A Telephone Mix-Up

“By tomorrow afternoon there will be eight telephones right here in Centerburg, Ohio, and one of them will be ours!” Dr. Ericksen said to his daughter, Meg. “I predict that before this decade is over, in just another five years, there could be a hundred! That’s how fast I foresee this technology will spread! When people need help, they’ll call me on the telephone. Envision how many lives it will save! Picture all the amazing benefits!”

Meg realized that not everyone thought the telephone was an engineering marvel. She had heard people say that telephones were a useless invention. A few others felt the newfangled machine would open up a Pandora’s box of troubles, causing people to stop visiting each other and writing letters.

Despite the concerns of some people, progress marched on. Just weeks earlier, Centerbturg’s first telephone had been installed in Mr. Kane’s general store, another was put in at the hotel, and yet another at the newspaper office. Mrs. Kane was the town’s first switchboard operator, directing incoming calls to the correct lines.

The next morning, Meg wrote “October 9, 1905” on the top of her slate with chalk while she squirmed in her seat, wishing that the long school day was over.

Walking home that afternoon, Meg scouted the street, looking for the tall wooden poles that were going up weekly. Thick wire linked one pole to another, and Meg imagined how each wire would carry the words of friends and neighbors, their conversations zipping over the lines bringing news, birthday wishes, and party invitations.

As Meg hurried into the house, she let the screen door slam shut behind her. There on the wall was the gleaming wooden telephone box with its heavy black receiver on a hook. Her father was smiling broadly while tinkering with the shiny brass bells on top. “Isn’t it a beauty?” he asked. “Have you ever seen such magnificence?”

Suddenly the telephone jangled loudly, causing both Ericksens to jump.

Meg laughed as her father picked up the receiver and shouted, “Yes, hello, this is the doctor!”

“Again please, Mrs. Kane! There’s too much static” Dr. Ericksen shouted. “I didn’t get the first part. Bad cough? Turner farm?”

“Can I go, Father?” Meg asked as Dr. Ericksen returned the receiver to the hook.

“Absolutely,” he said, grabbing his medical kit and heading outside where his horse and buggy waited.

When they got to the farm, they found Mr. Turner walking toward the barn.

“Jake, I got here as quick as I could,” Dr. Ericksen said. “Is it Mrs. Turner? Little Emma?”

“You?” Jake Turner looked confused, but he gestured them toward the barn.

There they found a baby goat curled near its mother. The baby snorted, coughed, and looked miserable.

“Jake, I’m no vet!” said Dr. Ericksen. “You need Dr. Kerrigan.”

“I was wondering why you showed up instead. I reckon there was a mix-up.”

“Apparently so,” Dr. Ericksen laughed. “When I get back I’ll send Dr. Kerrigan.”

As years passed the telephone proved to be very useful to the town of Centerburg, but there was always the occasional mix-up. It became common among the Ericksens to refer to a missed communication as “another sick goat.”

Make Connections

How did the invention of the telephone affect the town of Centerburg? ESSENTIAL QUESTION

Think of an invention and tell how it has affected your life. TEXT TO SELF

**TOEFL Junior:**

apparently (apparent)

broadly (breadth)

decade

gestured (gesture)

hook

slate

wire(wireless)

directing (direct)

**TOEFL:**

affect

apparently (apparent)

benefit

chalk

concerns (concern)

correct

foresee

gleaming (gleam)

grabbing (grab)

installed (install)

miserable

occasional

operator

scouted (scout)

static

useless

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 4

Wonders of the Night Sky

As Earth rotates on its axis, day becomes night. Suddenly, a gallery of lights is revealed! You may see a beautiful crescent moon. Maybe you’ll see one of the other phases of the moon. You may even see a series the sky like colored ribbons. For thousands of years, people have loved looking at the night sky. For almost as long, scientists have been trying to explain what they see.

**Aurora Borealis**

Every few years, an amazing light show is seen in the skies near the North Pole. It is known as “the northern lights,” or the aurora borealis (uh-RAWR-uh bawr-ee-AL-is). Brilliant bands of green, yellow, red, and blue lights appear in the sky.

People used to believe the lights were caused by sunlight reflecting off polar ice caps. The theory was that when the light bounced back from the caps it created patterns in the sky. In fact, the lights happen because of magnetic attraction.

The sun constantly gives off a stream of electrically charged particles in every direction. These nearly invisible pieces of matter join into a stream called a solar wind. As Earth orbits the sun, solar winds reach Earth’s magnetic field. As a result, electric charges occur that are sometimes strong enough to be seen from Earth. These electric charges cause the colorful bands of lights in the sky.

**Comets**

Another kind of light you might see move across the night sky is a comet. The word comet comes from a Greek word that means, “wearing long hair.” It came from the Greek philosopher **Aristotle** (AR-uh-stot-uhl), who thought that comets looked like stars with hair.

Long ago, people feared these mysterious streaks because they believed that they might bring war or sickness to Earth. Today, comets are less scary and mysterious because we know that they are a mixture of rock, dust, ice, and frozen gases that orbit the sun.

Comets move around the sun in an oval-shaped orbit. When a comet comes closer to the sun, the result is that a “tail” of gas and dust is pushed out behind the comet. This long tail is what people see from Earth.

Scientists think comets are some of the oldest objects in space. They can track **specific** comets and predict when they can be seen from Earth again.

**Meteors**

Have you ever looked up at the sky and seen a shooting star? Those streaks of light are not really stars at all. What we call shooting stars are usually **meteors** (MEE-tee-erz). Meteors are another name for the rocky debris and fragments that enter Earth’s atmosphere. Sometimes Earth passes through an area in space with a lot of debris. This is when a meteor shower occurs. You may see hundreds of “shooting stars” on the night of a meteor shower.

These days an **astronomer** or anyone with a portable **telescope** can raise new questions about space. What do you see when you look up at the night sky? Whether you look at a **sliver** of the moon or a fantastic light show, you are bound to see something amazing.

Make Connections

Talk about what causes some of the sights in the night sky. ESSENTIAL QUESTION

What do you wonder about when you look up at the night sky? TEXT TO SELF

**TOEFL Junior:**

constantly (constant)

enter (entry)

gallery

**TOEFL:**

astronomer(astronomy)

atmosphere

axis

bound

charged (charge)

comet

constantly (constant)

diagram

fragments (fragment)

mysterious

orbits (orbit)

particles (particle)

phases (phase)

portable

raise

revealed (reveal)

sickness (sick)

solar

theory(theoretical)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 5

Sing to Me

The cool white keys stretched for miles.

How would my hands pull

and sort through the notes,

blending them into music?

I practiced

and practiced all day.

My fingers reaching for a melody

that hung dangling,

like an apple just out of reach.

*I can’t do this.*

*I can’t do this.*

The day ground on,

notes leaping hopefully into the air,

hovering briefly, only to crash,

an awkward jangle, a tangle of noise

before slowly fading away.

My mom found me, forehead on the keys.

She asked, “Would you like some help?

It took months for my hands to do what I wanted.”

She sat down on the bench,

her slender fingers plucking notes

from the air.

*I can do this.*

*I can do this.*

She sat with me every night that week

working my fingers until their efforts

made the keys sing to me, too.

---Will Meyers

The Climb

“Go on, I dare you” My brother’s voice

mocking, a jaybird’s repetitive screech.

We are waiting for the bus

under our immense oak tree.

I reach for the lowest branch and find

another to pull myself up before

I lose my grip on the slippery bark

and slither down the trunk. Again.

Today, at school,

I drop my milk at lunch,

take a pop quiz,

and argue with my friends.

Today is my birthday.

When I get off the bus,

The oak tree doesn’t look

any smaller or bigger.

Today, I am ten years old.

I reach for the lowest branch

and find another to pull myself up.

My hands find another and another.

Over and over among the red

outstretched leaves,

foot to branch: push!

hand to branch: pull!

My brother is rooted on the ground,

staring up at me,

until finally, I can’t climb any higher,

or I will be a cloud.

---Sonya Mera

Make Connections

Talk about how each poet writes about success. ESSENTIAL QUESTION

Compare how the characters in each poem feel to how you feel when you are successful. TEXT TO SELF

**TOEFL Junior:**

awkward

higher (height)

slippery

**TOEFL:**

briefly (brief)

awkward

blending (blend)

character

crash

dangling (dangle)

immense

mocking (mock)

slippery

tangle

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 1

Sadie’s Game

The referee’s whistle went off like a shrieking bird, signaling Sadie’s second foul of the game. It was only the first quarter, and Sadie had already collided twice with another player’s wheelchair. Her coach waved her off the court for a substitution as the crowd shouted catcalls and jeered behind her. She had never seen a crowd express such disappointment before.

Sadie watched her teammates whirl and spin in front of her. Her emotions were all over the place, and it showed in her basketball playing. If only she and her brother had not argued this morning about the game. “What’s so important, Richie, that you can’t be at the game? Don’t I matter anymore?” Sadie had asked.

Richie was Sadie’s whole world, and they both loved sports, especially basketball. Sadie loved to play before her accident, and it was Richie who had taught her to play again afterward. There had been days when she did not want to get out of bed, and he would coax and bully her until she got up. He even borrowed a wheelchair himself to help her learn to play the game all over again. Together they would roll across the outdoor court, zipping, zooming, passing, and dribbling all day long.

But lately Richie preferred to hang out with his new high school friends. Sadie would watch through the window as Richie polished every little nook of his new car. He was as fussy as a mother cat cleaning her kittens. When he drove away, Sadie would keep staring out of the window, tears clouding her eyes.

Mama was her sun. Her arms would reach out and encircle her in a long, warm embrace. “Sadie,” she would say, “your brother loves you. Even though he's got new priorities now, that doesn't mean he doesn’t care.” But Sadie felt hurt.

Sadie looked up and saw her coach frowning. She searched sadly for her mother, expecting disappointment in her eyes, but instead she saw a wide smile. It was the same happy face she saw in portraits of her mother at home. Sadie followed her mother’s gaze to find Richie jogging toward her across the gym, holding a purple and white bouquet of flowers wrapped tightly with a ribbon. Richie’s eyes sparkled, and his smile gleamed. He bowed to his sister and handed her the flowers as though she were a queen.

“But we’re losing. How do you know we’re going to win?” she asked.

“I don’t,” Richie said. “It’s not important. What I know is you’re like a whirlwind on the court, and there is no way I am going to miss my little sister’s big game!” He put his hand on her shoulder as he said, “It’s great to have a lot of new friends, but I realized that you’re my best friend.”

Sadie smiled. Those words meant more to her than “I”m sorry” ever could. She rested the flowers on her lap and went back out onto the court. Right then Sadie decided to play the rest of the game with the bouquet in her lap. With her brother watching from the sidelines, Sadie stole the ball from an opponent and dribbled her way to the net, making the first of what would be many amazing shots for the team.

Make Connections

Talk about how Richie shows he cares about his little sister, Sadie. ESSENTIAL QUESTION

Whom do you care about in the same way that Richie cares about Sadie? Explain how you show you care. TEXT TO SELF

**TOEFL Junior:**

coach

collided (collision)

drove (driver)

emotions (emotion)

gaze

high (height)

opponent

priorities(prior)

**TOEFL:**

bowed (bow)

coax

court

embrace

foul

frowning (frown)

fussy

gaze

gleamed (gleam)

jeered (jeer)

opponent

portraits (portrait)

quarter

roll

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 2

My Big Brother, Johnny Kaw

I was just a tadpole of a girl when my family decided to leave the crowded city life behind. My daddy said, “There are territories out west with wide open spaces. The Kaw family needs room to grow!”

He was mostly talking about my big brother. At fifteen, Johnny had grown so tall that when he stretched out in bed at night his head hung out the front door and his feet hung out the back door all the way into the chicken coop where the hens laid eggs between his toes.

Mama loaded up the wagon with our belongings, and Daddy hitched up the oxen. We began to head west, but it wasn’t long until Johnny hollered for everybody to stop.

“We’ll never get there with these slowpokes pulling us!” Johnny scoffed. He unhitched the team and put one ox on each shoulder.

“Mind you don’t let them topple off!” Daddy hollered.

“Yes, sir!” Johnny said. “Tadpole can keep an eye on ‘em!” He picked me up and set me on top of his head where I had to hang on to handfuls of Johnny’s red hair to keep from falling off. Then Johnny grabbed hold of the hitch and j began pulling the wagon.

He never did have much sense of direction. He pulled that wagon one way then the other, faster and faster, digging out the biggest gully you ever saw. The next night a big rain came and filled it up. I hear that now they call that crooked gully the Kaw River.

Johnny pulled our wagon to a Kansas settlement where people were trying to figure out how to raise crops. “Problem is these mountains,” one settler said. “They are in the way.”

Johnny said that was no problem. He saw a big cottonwood tree, used a saw to cut it down, and whittled it into a giant scythe. Next, he whacked the mountains off down near the ground, hauled them west, and piled them up in a big row. Today folks call them the Rocky Mountains.

Everybody in Kansas was so happy with the nice flat land that they asked us to stay and homestead with them. We built a sod house and started planting wheat.

Now one summer it was mighty dry. All of the wheat had started to shrivel up in the field. Our neighbors came and asked for Johnny’s assistance. “My crop has about withered away to nothing,” said one neighbor. “Without rain we’re done for!”

“I have got an idea,” said Johnny, looking up at some puffy clouds. He grabbed hold of his big hoe and commenced poking holes in the clouds. Down came the rain in buckets, and the wheat was saved!

One morning at the riverbank, Mama was plunging our dirty clothes in the water to get them clean when a prospector rode up. He said he was headed to California to find gold. “Trouble is,” he said, “there’s not one decent trail between here and there.”

Mama said, “Let me talk to my son.”

Johnny was happy to help. For a he hiked back and forth to all kinds of places dragging his giant bags of wheat everywhere, clearing trails of trees, brush, and boulders. The gold rush folks were tickled to find good clear paths that they named the Oregon Trail, the Santa Fe Trail, and the Chisholm Trail.

I’m sure glad our family ended up in Kansas. Our neighbors tell us that this is a bad place for twisters, but so far we haven’t seen one. I can’t wait, though! Johnny plans to lasso that twister and ride it like a bucking bronco ---- and he’s promised his little sister a ride!

Make Connections

Talk about why the Kaw family moved to Kansas .ESSENTIAL QUESTION

If you could move somewhere new, where would you go? Why? TEXT TO SELF

**TOEFL Junior:**

decent

giant

twisters(twist)

wagon

**TOEFL:**

assistance (assist)

commenced (commence)

crooked

decent

forth

grabbed (grab)

hauled (haul)

hiked(hike)

mighty

prospector(prospect)

whittled (whit)

withered (wither)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 3

Stephanie Kwolek: Inventor

If you could invent a material for a superhero, what would it be like? It would have to be light, strong, bullet-resistant, and fireproof, right? Chemist Stephanie Kwolek actually invented a material just like this. It’s called Kevlar®. Superheroes don’t wear it, but everyday heroes like police officers and firefighters do.

**Becoming a Chemist**

From the time she was young, Stephanie was interested in math and science. She was not the kind of student who caused mischief, and she worked hard in school. Stephanie’s teachers spotted her talent and talked to her about careers in science. With their encouragement, Stephanie studied chemistry in college. She had hoped to go on to medical school but could not afford it.

Consequently, Stephanie took a job working at a textile lab. She planned to save up enough money from her job so that she could pay for medical school. At the lab, she discovered that she had a genuine love of chemistry. She learned how to make chain-like molecules called polymers that could be spun into fabrics and plastics.

Stephanie enjoyed doing experiments so much that she decided not to go to medical school.

**A Strange Liquid**

In 1964, Stephanie’s lab supervisor asked her to work on making a strong, stiff fiber. The United States was facing a possible gas shortage, and scientists wanted to help. They believed that if you could reinforce tires with a lightweight fiber rather than heavy steel wire, cars and airplanes would use less gasoline. Stephanie began experimenting by mixing polymers. One day, she made an unusual solution, or mixture. Polymer solutions are often thick like molasses. However, this solution was cloudy and watery.

Stephanie brought her strange liquid to the worker in charge of spinning liquids into fibers. He looked at Stephanie’s solution and laughed. He thought it was hilarious that she believed it could be made into fiber. It looked too much like water and might even clog the spinning machine. But Stephanie kept urging him to spin it until he finally agreed. When he followed the procedure, a strong fiber began to form. Stephanie’s head spun, and she felt dizzy with excitement.

**Stronger than Steel**

Stephanie tested the fiber in the lab and found that it was fireproof. It was stronger and lighter than steel, too. With these qualities, she believed that the fiber could be turned into a useful material. She was right. The material became known as Kevlar®.

After Stephanie’s discovery, it took almost a decade of teamwork to develop Kevlar®. Some people spent hours on the telephone with the patent office. Others had to think of ways to use and sell it. Nowadays, Kevlar® is used by almost everyone. The President and other politicians wear protective clothing made from it. So do lumberjacks, firefighters, and police officers. Kevlar® is also used in tires, bicycles, spacecraft, and skis. By developing Kevlar®, Stephanie had found a way to make protective clothing and equipment that is both light and strong.

Stephanie’s invention has saved many lives over the years. She was inducted into the National Inventors Hall of Fame for her work, and her photograph has appeared on a book cover and in advertisements for Kevlar®. She says that she never expected to be an inventor but is delighted that her work has helped so many people.

Make Connections

What problems did Stephanie’s invention solve? ESSENTIAL QUESTION

What would you make out of Kevlar®? Explain why. TEXT TO SELF

**TOEFL Junior:**

decade

gasoline

genuine

spotted (spot)

wire (wireless)

resistant (resist)

**TOEFL:**

afford

careers (career)

charge

clog

equipment

excitement

gasoline

genuine

hilarious

liquid

molecules (molecule)

reinforce

resistant (resist)

solar

spotted (spot)

stiff

talent

textile

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 4

Your World Up Close

Does the picture on the left show a diamond or a glass prism? Look closer. Take a step back. You are *too* close.

It is a picture of a sugar crystal. This extreme close- up was taken by an electron microscope, a tool that can magnify an item to thousands of times its actual size.

Pictures taken with a high-tech electron microscope are called photomicrographs. The sugar crystal on the left may look huge, but the word *micro* means small. We are seeing a small part of the sugar crystal up dose.

Photomicrography dates back to 1840 when a scientist named Alfred Donné first photographed images through a microscope. Around 1852, a German pharmacist made the first version of a camera that took photomicrographs. In 1882, Wilson “Snowflake” Bentley of Vermont became the first person to use a camera with a built-in microscope to take pictures of snowflakes. His photographs showed that there is no such thing as a typical snowflake. Each is unique. Nowadays, we have electron micrographs.

The light microscopes you use in school are weak and do not show much detail. An electron microscope is a much more powerful tool, and it allows scientists to see things we can’t see with our own eyes such as skin cells or dust mites.

The picture below is a close-up of human skin and shows the detail an electron microscope can capture. The more an image is magnified, the more detail you will see m the photograph. The most magnification that a photomicrograph can capture is about 2 million times the original image size.

Magnified images have helped scientists to see what causes diseases. Over the years, scientists have learned how these diseases behave. Looking through microscopes, we have even learned what is inside a cell or how a snowflake dissolves into a drop of water.

Scientists use electron micrographs to see how objects change over time. For example, we can look at a piece of fruit to see how it decays. First the fruit looks fresh. After a few days it begins to soften. Then specks of mold appear and cling to it. Days pass and eventually the fruit is covered in mold. We can see these changes under the microscope far earlier than we can see them with just our eyes.

Suppose you mingle outside on a humid day with friends. What would the sweat on your skin look like magnified? The possibilities are endless if you examine your world up close.

Make Connections

How do electron microscopes help scientists? ESSENTIAL QUESTION

What objects in your classroom would you like to see under a microscope? TEXT TO SELF

**TOEFL Junior:**

capture

unique

actual

**TOEFL:**

behave

cling

crystal

decays (decay)

endless

eventually (eventual)

humid

typical

unique

mold

original

resembles (resemble)

suppose

version

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 5

Where It All Began

**Take a tour of Jamestown, Virginia, the birthplace of America.**

They thought they were lost. The *Susan Constant*, the Godspeed, and the *Discovery* had sailed from London, England, on December 20,1606. The expedition was bound for Virginia, carrying 144 people.

Finally, on April 26,1607, the ships sailed into Chesapeake Bay. In the words of one voyager, they found “fair meadows and goodly tall trees.” On an island in a river, they built a fort and named it after their king, James. Jamestown would become the first successful, permanent English settlement in the New World.

**The Struggle to Survive**

There is a proverb that says, “Ignorance is bliss.” In the case of the 104 men and boys who came ashore, this was true. They were faced with tremendous challenges. The water from the James River was not safe to drink, and food was scarce. Two weeks after the settlers arrived, 200 Indians attacked them.

John Smith, an experienced military man, became head of the colony in 1608. He had been in charge of finding local tribes willing to swap food for English copper and beads. Smith was tough with both the Indians and Englishmen. “He that will not work, shall not eat,” he told the colonists. Smith knew that an attitude of every man for himself would endanger the colony.

The western Chesapeake area was ruled by Chief Powhatan, who governed an empire of 14,000 Algonquian-speaking peoples. His daughter, Pocahantas became a useful, friend and ally to John Smith.

**The Real-Life Pocahontas**

Princess Matoaka was born around 1595. Her father, Chief Powhatan, called her Pocahontas. She saved John Smith’s life twice, and he wrote that Pocahontas’s “wit and spirit” were unequaled.

Pocahontas married a planter named John Rolfe, the first marriage in that era between an Englishman and a Native American woman. Rolfe, Pocahontas, and their son visited London. She never returned home ---- she fell ill aboard a ship bound for Jamestown in March 1617 and died.

TIME FOR KIDS

**Taking a Closer Look**

Archaeologists digging in Jamestown have discovered Indian artifacts along with English ones, evidence that Indians lived in the fort for some time. “It must have been a very close relationship,” says William Kelso, an expert in colonial American archaeology.

Kelso has worked for 10 years to document this site. His team has managed to uncover more than 1 million artifacts and has mapped out the fort’s shape, its foundations, and a burial ground.

Jamestown left a record of greed and war, but it was also the start of representative government. The settlers gave America a solid foundation to build upon.

Make Connections

Talk about what archaeologists have found at the Jamestown site. ESSENTIAL QUESTION

What would you have liked to ask John Smith about Jamestown? TEXT TO SELF

**TOEFL Junior:**

constant

**TOEFL:**

challenge

ally

bliss

bound

charge

constant

copper

uncover (cover)

endanger

unequaled (equal)

evidence

expedition

experienced

ignorance

tremendous

permanent

scarce

site

survive

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 1

A Surprise Reunion

Chief Cameahwait looked with intensity across the Shoshone camp. The tribe prepared for the Rabbit Dance as warriors oiled their leather costumes. The dance was done to honor the rabbit as an important food source. The Shoshone had used traditions such as this dance since the beginning of time to mark special occasions and remember their ancestors.

In the distance laughing children were playing with a ball made from rawhide. They rolled the ball into a circle drawn in the dust If the ball rolled outside the circle, the child must forfeit his or her turn. Cameahwait smiled as he remembered the games he had played as a child.

But Cameahwait grimaced beneath his smile. He felt a dull pain in his stomach for his little sister. She had been snatched from the camp during a raid long ago. He despised those who had taken her. He closed his eyes and pictured the games they had played together. She had been scrawny and demanding and had an irritating habit of following him everywhere, he remembered. He missed her assertive manner and her constant questions. What had become of her?

“It is time to ride,” Hawk-That-Soars said, interrupting his thoughts. Cameahwait came back to reality, turned, and mounted his horse.

A man named Captain Lewis had approached the Shoshone days before. Cameahwait knew that Lewis had come in peace, and so he welcomed him and his party. Lewis told the Shoshone his story. He explained that he was part of a company with a mission: he was to explore the land that stretched from the Missouri River to the great ocean. He then asked the chief for a favor. He explained that the rest of his party was waiting at the river with a supply boat. Lewis needed the strength and endurance of the Shoshone horses to help transport the supplies across the difficult land. In return Lewis offered the Shoshone food and other goods.

Cameahwait’s party arrived at Lewis’s camp. There he met Captain Clark.

“Let’s sit and discuss how we may help each other,” said Clark. He led the men inside tent. Buffalo blankets were spread all around. As they settled inside, Lewis addressed the chief. “We travel with a woman who knows your language.”

A slender woman with long, dark braids entered the tent. Her eyes adjusted to the dim light filtered through the thick cloth. She nodded to the chief. “I am Sacagawea,” she said.

Cameahwait could not believe his eyes! He examined the features of her face. He watched as her expression slowly changed. He immediately knew this was the same sweet face of his lost sister.

Sacagawea quickly ran to him. Tears filled her dark eyes. The pain and sadness that Cameahwait had carried over the years retreated to a forgotten place.

“My brother!” she cried, “Is it really you? How long has it been?”

Lewis and Clark were happy to have been unwitting partners in this reunion. Chief Cameahwait promised them he would provide whatever help and resources they needed.

“You have given me a great gift,” Cameahwait told them. “You have reunited me with my beloved sister. Our people will sing and tell stories so that all may remember and honor this day for generations to come.”

Make Connections

How do traditions and the past connect the chief and his sister? ESSENTIAL QUESTION

What traditions do you honor in your family? TEXT TO SELF

**TOEFL Junior:**

approached (approach)

constant

during (duration)

entered (entry)

favor (favorable)

generations (generation)

provide

**TOEFL:**

adjusted (adjust)

constant

costumes (costume)

despised (despise)

dim

explore

immediately(immediate)

interrupting (interrupt)

nodded (nod)

offered (offer)

raid

rolled (roll)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 2

Freedom at Fort Mose

By September of 1754, twelve-year-old Lucius Jackson and his family had been living at Fort Mose in St. Augustine, Florida, for a year. They were part of a group who had escaped from a plantation in South Carolina. They had heard that Fort Mose was a place of refuge for runaways. Over the years many people were willing to endure the treacherous journey there in return for the promise of freedom. During his time at Fort Mose, Lucius kept a diary to record what happened there.

**17th September 1754**

It has been raining for more than a week now. This weather reminds me of my days learning to read and write back in Charleston. When the rains came m couldn’t work in the fields, and we were forced to stay in the cabins. We knew that Mr. Slocum, the landowner, detested getting his boots wet so he rarely came to check on us. He thought that all we knew were work and obedience. Miss Celia took a great risk writing letters and words on the dirt floor of the cabin for us children to learn. She said that, as the eldest member in our cabin, it was a risk she ms willing to take. Learning to read ms easy for me because I ms so happy to learn how to turn letters into words and words into ideas. I believe that reading is a gift that cannot be measured. Mr. Samuel Canter believes this, too. He is a farmer who lives near us and who gave me this fine diary. He said, “You are doing a good thing, Lucius. In years to come people can read about this place and understand what m have risked to gain our freedom!”

**8th October 1754**

Last night I opt to go on patrol with my father! My duty involved walking along the wall of the fort with him looking and listening for anything unusual. It has been a Mk since m came under attack, but m cannot let down our guard. We also listen for any people who may be coming here to seek freedom, as m did about one year ago.

While ow patrol thought about the night my family came to Fort Mose and how scared but hopeful of us felt as we entered through the big heavy gate.

I must stop waiting now as it is my turn today ta help gather palm fronds, which we lay out in the sun to dry. Once they are dried, they can be used to repair older huts and to build new ones. Each week more people come to the fort. Our priest, Father de Las Casas, keeps the recant, and he tells us that there are almost a hundred people now.

**26th October 1754**

Last week a new family arrived all the way from Virginia and, like everyone else, they arrived almost starved and weak beyond belief. My mother helped the family by giving thew clean clothes to replace the owes they had been wearing, and their old ones were quickly discarded. The day after they arrived, I tried to talk to the boy who is about my age, but he ignored me.

The next day, I tried again to speak to the boy name is Will. I showed him this diary and explained that it depicts as accurately as possible our life at Fort Mose and the people who come here. Me seemed surprised and asked, “You know how to read and write?”

“Yes,” I told him. He looked at me without speaking, but I could see a question in his eyes. “Do you want to learn?” asked him.

“Is it not dangerous?” he asked quietly, looking around to see if anyone could hear us.

I smiled, remembering how long it took me to understand freedom and what it meant

“Will,” I said to my new friend, “here at Fart Mose, you are free to learn, and I am free to teach you.”

We began our lessons right away.

Make Connections

Talk about why diaries like Lucius Jackson's represent an important record of the past. ESSENTIAL QUESTION

If you could read a diary from any era in the past, what time period would you choose? Why? TEXT TO SELF

**TOEFL Junior:**

during (duration)

starved(starvation)

**TOEFL:**

accurately (accurate)

depicts (depict)

detested (detest)

discarded (discard)

endure

ignored(ignore)

obedience

refuge

reminds (remind)

risked (risk)

scared (scare)

starved (starve)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 3

The Great Energy Debate

Our energy debate will be an incredible event, but I need to study. Our teacher won’t tell us which side of the debate we'll be on until the day before it happens, which means we’ll have to preplan arguments for both sides.

The debate will be next Tuesday and will include a discussion about different energy sources. Each team will have a microphone. One team will talk about the J benefits of an energy source, and the other team will talk about its drawbacks. We’ll have to learn about the environmental consequences related to each resource, as well as the costs.

We may be asked to debate the future of gasoline as an energy source. If so, I would say that gasoline is made from oil, a fossil fuel. According to geologists, fossil fuels formed over hundreds of millions of years from ancient plant and animal remains. But here's the problem: we use these fuels far faster than it takes them to form. Because fossil fuels are nonrenewable resources, if we keep using them eventually there will be none left. Plus burning these fuels pollutes the air!

It is easy to be hypercritical of fossil fuels. However, most of our cars and factories use this type of fuel, and therefore changing everything would be a huge undertaking.

**What Is Energy?**

Energy is the ability to do work or make a change. It is also is a source of power for making electricity or doing mechanical work. We use the wind, the sun, fossil fuels, and biofuels to produce energy. Burning coal produces heat energy that is converted into electrical energy. We use that energy to light our houses. Solar energy comes from the sun. Solar panels convert sunlight into electrical energy.

If we are asked to debate the use of wind energy, we would have to know that this is a renewable energy source. For example, unlike fossil fuels, wind will never run out. One large wind turbine could produce enough energy for a whole city! In addition, this method doesn’t damage the environment. Turbines can be placed all over the world to capture wind energy. Then the energy from the turbines is converted into electrical energy. But there is a drawback. Wind may not be as efficient as other energy sources. Only about 30 or 40 percent of all wind energy is changed into electricity. It would be very expensive to have wind turbines installed all over the world.

This debate is important for people in the United States. Our country makes up only about 5 percent of the entire worlds population. Yet we consume about 30 percent of the world’s energy. It is not a coincidence that students are asked to take part in these debates. We will probably have to make these decisions when we are adults. The debate will be difficult but I will be ready!

Make Connections

How might our dependence on fossil fuels change in the future? ESSENTIAL QUESTION

What can you do to help save energy resources? TEXT TO SELF

**TOEFL Junior:**

capture

consume

debates (debate)

expensive (expense)

gasoline

geologists (geology)

undertaking(undertake)

**TOEFL:**

adults (adult)

benefit

coincidence (coincide)

burning(burn)

consume

converted (convert)

debates (debate)

drawbacks (drawback)

efficient

gasoline

incredible

installed (install)

undertaking

mechanical

pollutes (pollute)

consequences(sequences)

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 4

The History of Money

What makes money valuable? If you think about it, a dollar bill is only a piece of paper. You cannot eat, wear, or live in a dollar bill So why do people want it? Think about the proverb, “Money doesn’t grow on trees.” Money is considered valuable because it is hard to get.

**Bartering**

Imagine you’re a goat herder visiting a marketplace in China in 1200 B.C. The merchandise being sold around you ranges from cattle to tools. Suppose you need to purchase a piece of rope. How will you pay for it? The goats you own are your sole source of income so you would not want to trade a goat for the rope. The goat is too valuable! Instead, you might trade goat milk for the rope. This system of economics is called bartering. But what if the rope merchant does not want goat milk?

**Early Currency**

No need to cry over spilt milk. Luckily, you sold some goat milk earlier in the day in exchange for ten cowrie shells, the first system of currency in China. You hand two cowrie shells to the rope merchant and put the rest in your pocket. This is a much easier way to buy and sell things. Cowrie shells are lightweight, durable, and easier to take with you than a goat. The idea of currency is catching on around the world in Thailand, India, and Africa.

You decide to save your extra shells until you have enough to invest in another goat. You will be spending cowries with the expectation that another goat will pay off later since you can drink or sell the milk it produces. Taking this type of business risk makes you an entrepreneur.

**New Kinds of Currency**

If you were at a marketplace in Rome around 900 B.CV you might have used salt as a form of currency. The idiom “to be worth one’s salt” is still used today.

Another form of currency, metal coins, first emerged in China around 1000 B.C. Coins varied in shape, size, and worth. By the 7th century B.C., coins made of precious metals such as silver and gold became popular in Europe and the Middle East These coins were usually round. After being weighed on a scale to determine their value, coins were stamped with designs that stated their worth

**Glossary of Money Terms**

BARTERING (BAR-tur-ing) Trading by exchanging food, services, or goods instead of using money.

CURRENCY (KUR-uhn-see)

Any form of money that is used in a country.

ECONOMY (ee-KON-uh-mee)

A system or method of managing the production and distribution of money, goods, and services.

MARKETPLACE (MAR-kit-plays) A place where food and goods are bought and sold, or the world of business, trade, and economics.

**Paper Money**

Carrying a bag of coins can be heavy. The weight of coins and a metal shortage are two reasons the use of paper money developed in China in the 10th century. The earliest European paper money appeared in Sweden at the beginning of the 17th century. Italy started to use paper money about 90 years later. Paper money originally represented the gold or silver a person had in the bank. Today, we can tell the value of paper money by reading the numbers printed on it.

**Modern Money**

In today’s global economy, exchanging money electronically is common. Many people use a credit or debit card to make a digital transaction. Numbers on a computer screen represent dollars and cents, but no actual paper money is exchanged.

As easy as it is to spend money today, saving money is important. When considering spending money, think of the famous proverb, “A penny saved is a penny earned.”

Make Connections

Why did using currency replace bartering? ESSENTIAL QUESTION

How does money affect your daily life? TEXT TO SELF

**TOEFL Junior:**

durable

extra

herder (herd)

merchant

number

scale

spilt (spill)

value

valuable

**TOEFL:**

bartering (barter)

bill

coins (coin)

credit

currency

durable

economics (economic)

entrepreneur

exchange

glossary

transaction (transact)

typical

merchandise

originally

precious

purchase

scale

sole

suppose

varied(vary/ various)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 5

Climbing Blue Hill

When the yellow leaves begin to

glimmer among the green ones,

we hike up Blue Hill

through an early morning mist.

“It’s not much farther, boys!”

My grandfather bellows happily,

his words an echo of all the other times

he’s had to urge us up a steep trail.

I hear the comforting squeak of his boots

as the ground’s chill breath whispers

against our ankles and the overgrown

branches tug curiously at my hair.

Abruptly, the trail spits us out,

onto gray rock, into blue sky and sunlight.

My brother shouts, shoves me aside,

races to the low bushes huddled against the wind.

His fingers tug at the tiny leaves.

“Look! Blueberries!” He yells.

And we gobble the blue sweetness up,

my brother, my grandfather, and me.

---Andrew Feher

My Name is Ivy

“Why did I name you after a plant?

Look, this is ivy,” my mother explains,

pointing at an intricate fan

of glossy green heart-shaped leaves

decorating the side

of our house.

“Ivy will grip onto anything,

will grow where it wants to go.

Will use its long skinny fingers

to find a way over

brick walls, up stone walls,

will climb a roof and keep on

going until it touches

the starts.”

---Bryce Neale

Collage

Grandma gave me her eyes.

“Eyes of a panther,” Grandpa whispers.

Grandpa gave me his nose.

“A bumpy, rocky road of a nose,” Grandma scoffs

Dad gave me his long skinny toes.

“My roots reach back to the lemurs,” he jokes.

Mama gave me her lopsided smile.

“Don’t ever lose it,” she warns.

And I gave them my heart.

“It’s big enough to hold you all,” I say.

----Mana Diaz

Make Connections

What do these poets think shapes a person’s individuality? ESSENTIAL QUESTION

What has influenced you? TEXT TO SELF

**TOEFL Junior:**

race

spits(spit)

**TOEFL:**

chill

curiously (curious)

glossy

grip

hike

intricate

tug

shoves(shove)

squeak

urge

yells (yell)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

**Wonders G5**

Unit 1 Week 1

A Fresh Idea

One bright Saturday morning, Mali and her mom walked around the neighborhood. That is, her mom walked, but Mali ran, skipped, jumped over puddles, and visited the neighbors’ dogs. Mali paused to look at the budding trees on her block. “I can’t wait until summer,” she said, “especially for Mrs. Fair’s great tomatoes at her market stand.” She pointed.

Mali’s mom stood looking at the empty lot where the market set up every summer weekend. She looked at Mali. “Honey, Mrs. Fair told me last week that she had to close her stand. She’s really getting too old to run it anymore.”

Mali turned, started, and put her hands on her hips. “But Mrs. Fair’s stand can’t close!” she said. “It’s the only place in the neighborhood we can buy fresh, delicious tomatoes.” Then she added, to show she wasn’t being selfish, “Everyone needs fruits and vegetables for a healthy diet.”

After they got home, Mali headed out to her backyard swing to think. “If only I could plant a garden,” she thought, “but our yard is way too small” Just then, she noticed her neighbor, Mr. Taylor, looking at his daffodils. Mali knew he was thinking about how he had planted those flowers with his wife. This was the first spring since his wife had died, and Mali saw the sadness on his face. Then she had an idea.

Mali cleared her throat, and Mr. Taylor looked up. Mali decided to walk over to the fence. “Hi, Mr. Taylor,” she said. He waved, and turned away. “Wait!” Mali cried. Taking a risk while she still felt brave, she rushed to gather her thoughts: “Mr. Taylor, Mrs. Fair isn’t doing her tomato stand anymore because she’s getting old. So I’d like to grow tomatoes. I don't want to get in the way of your flowers, though. I mean, I really like tomatoes.”

Suddenly, Mr. Taylor smiled. “Mali, I’m not sure what you're talking about, but you’ve made me smile. Reasons to smile have been scarce lately. What do you want to do?”

As Mr. Taylor listened, an idea came to him. “I still need a place to plant my flowers, but there’s room for tomatoes. How about I make you a loan? I’ll let you use a plot of land in my yard. I’ll help you, and when your garden starts to prosper, you can repay me with a few tomatoes.”

Mali and Mr. Taylor shook hands on this deal. “But first,” Mr. Taylor said, “you’ll have to make an investment by buying some tomato plants at the nursery.”

Mali thought. “Well, I have some savings from my allowance, and I was saving to buy a computer game.” She paused. “But I’d rather have tomatoes, so let's start right away!”

The next day, Mali bought all the tomato plants she could afford. Mr. Taylor taught Mali how to prepare the soil and place the plants. Finally, Mali placed stakes in the ground to help hold the plants up. Mr. Taylor explained, “Once the tomatoes come, the heavy fruit makes the branches bend.” Then all they could do was water, pull weeds, and wait.

When the fruit ripened, there were more juicy, red tomatoes than even Mali could have imagined. “There is no way I can eat all these,” she realized. On Saturday, Mali and Mr. Taylor carried several crates of ripe tomatoes to the market, and by the day’s end they had sold them all. “Not only did I get back the money I invested,” said Mali, “but I also made a profit of twenty dollars!”

Mr. Taylor said, “Those are also your wages! You’ve earned that money.”

Mali beamed and said, “Mr. Taylor, maybe you could sell some of your flowers, and we could run a market stand together!” Mr. Taylor, picturing a garden of zinnias and marigolds, was already looking forward to next summer.

Make Connections

How did Mali and Mr. Taylor each get something they needed? ESSENTIAL QUESTION

How has someone helped you get something you needed? TEXT TO SELF

**TOEFL Junior:**

**TOEFL:**

afford

block

budding (bud)

diet

headed(head)

loan

plot

puddles (puddle)

ripe/ ripened (ripen)

scarce

selfish

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 2

Whitewater Adventure

I don’t know about you, but I never pictured my family on a whitewater rafting vacation in Colorado. We had tried rafting several times before with instructors and guides. All of us liked it! I come from a family of excellent athletes, and I sometimes have to work hard at holding my own. I didn’t even mind when my sister, Marta, who is fourteen, kept correcting my technique. Because she’s three years older, Marta believes it’s her mission in life to make sure I do everything perfectly. “Nina, hold your paddle this way. Nina, plant your feet firmly,” she corrects. Honestly, sometimes she’s full of herself, although I guess she means well.

That morning, Dad had us assemble our equipment, as we had learned. He then took us through his checklist. Only Dad could read his checklist because his handwriting was so hard to decipher. “Paddles - check, helmets - check, life jackets - check, buckets - check,” until everything was accounted for. Then we boarded our raft for our second solo trip and headed down the beautiful Colorado River.

Mom had mapped out our route ---- a novice’s course with just enough whitewater to make it exciting. It felt great to navigate the raft, paddling in rhythm with everyone else. Dad and I sat in the rear, or stem, of the raft. Mom and Marta sat in the front, or the bow. From time to time, waves slapped against the sides of the raft, spraying water in our faces.

Suddenly, I was distracted by a bear coming out of the trees, but it turned around and began to retrace its steps. All of us must have been distracted by that bear because, in the blink of an eye, we ran into a problem! Our raft came to a complete halt.

“What’s wrong?” I asked, hoping I didn’t sound nearly as anxious as I felt.

“Yikes!” exclaimed Mom. “We’re stuck on some rocks!”

“Maybe a river guide will come by and give us a shove, suggested Marta. However, there wasn’t a soul in sight. She tried shouting, “HELLO, OUT THERE!” All we heard back was an echo. To make matters worse, storm clouds were gathering. The last thing we needed now was a rainstorm.

“Don’t worry, folks, I know what we can do,” said Dad. “It's the front of the raft that’s stuck, so let's all sit in the stem. Our weight will probably shift the raft off the rocks.” Carefully, Mom and Marta moved to the rear. Nothing happened.

“Let’s try swaying from side to side,” urged Mom, looking up at the darkening sky. So we swayed and swayed, but the raft didn’t move an inch. Dad even tried jumping a couple of times, but that didn’t work either. Now it started to drizzle, and although no one wanted to admit it, we were running out of options.

“Wait!” I yelled. I thought back to our rafting lessons. “What if we tried to lift the side of the raft away from the rocks?” asked hesitantly.

“Quick, let’s try it!” said Mom. We went to the front of the raft and lifted the side away from the rocks. Then we heard a little popping noise. We held our breath.

“Did we tear the raft?” cried Marta.

“No, we broke the suction between the raft and the rocks!” said Dad, as he pushed off the rocks with his paddle.

“We did it!” yelled Marta. “I mean, you did it, Nina ---- that was truly brilliant!”

“Good thinking, Nina!” cheered Mom and Dad.

By this time, it was raining steadily, so we paddled really hard to return to land and wait indoors for the rain to stop. And how was I feeling? It’s kind of hard to describe. I was on cloud nine! I felt like I could accomplish anything I wanted.

Make Connections

Talk about why Nina and her family had to rethink solutions to the problem of being stuck on the rocks. Compare the different ideas they came up with. ESSENTIAL QUESTION

When have you had to rethink an idea in order to solve a problem? TEXT TO SELF

**TOEFL Junior:**

accomplish

complete

exclaimed (exclaim)

navigate

options (options)

**TOEFL:**

assemble

accounted (account)

admit

athletes(athlete)

bear

blink

boarded (board)

bow

distracted (distract)

drizzle

exclaimed (exclaim)

firmly(firm)

halt

instructors (instruct)

retrace (trace)

navigate

novice

options (option)

shove

slapped (slap)

spraying (spray)

suggested (suggest)

urged(urge)

yelled (yell)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 3

A Life in the Woods

Into the Woods

Henry David Thoreau raised his pen to write, but the chatter of guests in the next room filled his ears. He stared at the page, “Concord, 1841” was all that he had written. How would he write a book with such noise in his family’s house? Thoreau headed outside, shutting the door with emphasis. He would have to find a place of his own.

Thoreau walked out of town. Tall white pines soon replaced the painted houses. He listened to the rustling of the leaves. What if I could stay here, he thought. He could live off the land, close to nature, and begin his book. It would take work, but he could do it

Years passed, but Thoreau still did not have a place in the woods. One day, his friend Ralph Waldo Emerson had an idea. Emerson was a well- known writer who had bought some land near Walden Pond. Because he and Thoreau shared the same interest in nature, Emerson decided to let Thoreau use part of this land.

In March of 1845, Thoreau began to build a cabin. By July, it was ready. He could live and write in the woods.

Cabin Life

Thoreau’s move to the woods indicated that he liked to be alone. But Thoreau did not feel that way. “I have a great deal of company in my house,” he wrote. Red squirrels woke him by running up and down the sheer sides of his cabin. A snowshoe hare lived in the debris under his cabin, thumping against the floorboards. A sparrow once perched on his shoulder. Thoreau recorded these experiences in his journal. How easily writing came to him with the beauty of nature around him!

On Walden Pond

Thoreau was a naturalist. He noticed the habits of animals. Each encounter showed him something new. One afternoon, Thoreau tried to get a close look at a loon, but the bird quickly dove into the pond. He knew loons could travel long distances under water, so he guessed where it would come up. But every time Thoreau paddled to one spot, the loon came up somewhere else and let out a call ---- a howling laugh. What a silly loon, Thoreau thought. But after a while, Thoreau felt as though the bird was laughing at him because he still could not catch up to it. Thoreau wrote in his journal:

His white breast, the stillness of the air, and the smoothness of the water were all against him. At length he uttered one of those prolonged howls, as if calling on the god of the loons to aid him, and immediately there came a wind from the east and rippled the surface, and filled the whole air with misty rain, and I was impressed.

The spectacular scene made Thoreau wonder at the loon. It no longer seemed a silly animal, but one with some mysterious power. As months went by, Thoreau also became aware of each animal’s ability to stay alive. “His power of observation seemed to indicate additional senses,” Emerson once remarked. In winter, as he warmed his cabin by fire, he watched in awe as the moles warmed their nest by their own body heat. He understood forest life as never before.

Back to Concord

Like the geese that move to new ponds at the season’s end, so too did Thoreau leave Walden. He had done what he had set out to do, and had learned much from the woods around him. He packed his few belongings and his stack of journals and returned to Concord. Now, he would turn his journal entries into a book. Generations to come would know life on Walden Pond!

Make Connections

Talk about how Thoreau’s experiences at Walden Pond changed his view of nature.

ESSENTIAL QUESTION

Think about a time that you saw something in nature close- up. How did it change your idea about it? TEXT TO SELF

**TOEFL Junior:**

aware

emphasis

encounter

generations (generation)

**TOEFL:**

aid

awe

chatter (chat)

deal

howling(howl)

immediately(immediate)

indicated (indicate)

mysterious

prolonged (prolong)

raised (raise)

sheer

silly

spectacular

spot

thumping(thump)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 4

Fantasy Becomes Fact

Inventing the Future

Have you ever imagined ways of traveling into space? Or have you used a tool and wished it did something more? One person who thought just this way was the science fiction writer Arthur C. Clarke. Arthur is most famous for writing novels and stories about science and the future. But you may not know that real inventions came about as a result of things he first imagined!

In his writings, Arthur envisioned technologies that did not yet exist, but might This was no accident. Arthur studied and used scientific knowledge all during his lifetime. Arthur wrote about advanced computers and spaceships. Years later, these technologies were developed.

Science at an Early Age

Even as a child, Arthur was passionate about science. Born in England in 1917 in a small town by the sea, Arthur spent his school years enthusiastically reading his favorite science fiction magazine. He was fascinated by astronomy and built a telescope when he was just 13. He also started writing his own science fiction stories. He even published them in a school magazine. Arthur loved imagining the future.

Arthur’s own future became uncertain as a teenager, when his father died. Since his mother could not afford to send him to college, Arthur moved to London at the age of 19 and got an office job. In his free time, he worked at the subjects he loved. He also continued to write science fiction. His love of science and its possibilities would soon be useful.

Predicting the Future

In 1939 Arthur joined the Royal Air Force to help fight the Second World War. It was there that Arthur began to invent. Arthur became an expert in the radar systems used to guide planes and detect enemies. This technology gave Arthur ideas. He imagined an amazing breakthrough in communication systems. He proposed a wireless system using space stations. This system required rockets to carry satellites into space. Then the satellites would help transmit signals around the Earth. Since satellites and space stations did not exist, this idea was a demonstration of Arthur’s imagination. He had learned much about space.

As with any inventor, Arthur built on technologies that already existed to create his system. For example, lockets had been invented but could not yet travel into space. In 1957, Russia used a rocket to launch *Sputnik 1*, which became the first manmade object to orbit Earth. In the 1960s, a satellite communications system was created. It was just like the one Arthur had envisioned years before. Years later, the same kind of satellite was used to make cell phone communication possible. Although Arthur claimed the communications system as his own idea, he did not apply for patents. As a result, he never made money from his idea.

Can Science Fiction Come True?

In 1968, Arthur published one of his best-known novels, *2001: A Space Odyssey*. In the novel, Arthur imagined a computer that controlled almost everything. Arthur’s computer idea, HAL, could actually think for itself. Today, computers cannot think for themselves. However, they do control many of the devices in our homes, cars, planes, and spacecraft. HAL could recognize human voices as well as speak back. This technology did not exist when the book was written, but it is common today. Arthur’s novel also predicted advances such as space stations and rocket-powered missions to far-off planets. He even predicted people reading news on electronic screens!

Arthur C. Clarke’s science fiction books have captivated readers around the world. Many of the technologies he wrote about seemed like fantasy at the time, but they turned into fact. His creative ideas may have inspired others to invent the very technologies he imagined.

Make Connections

Talk about how existing technology helped Arthur C. Clarke imagine other inventions. ESSENTIAL QUESTION

What are some ways you would like to improve a machine or other object that you use in your everyday life? TEXT TO SELF

**TOEFL Junior:**

apply

captivated (capture)

continued (continual)

devices (device)

during (duration)

enthusiastically (enthusiasm)

favorite (favorable)

knowledge

wireless

**TOEFL:**

advanced/ advances (advance)

afford

apply(application)

astronomer(astronomy)

captivated (captivate)

constructed (construct)

detect

devices (device)

diameter

enthusiastically (enthusiasm)

fantasy

fascinated(fascinate)

fiction

launch

orbit

passionate

planets (planet)

proposed (propose)

recognize

screens (screen)

spaceships (spaceship)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 5

Are Electronic Devices Good for Us?



**Plugged In**

***Kids need to spend time using electronic devices.***

Do you love to surf the Internet, listen to music, IM, and talk on a cell phone? You are not alone. A recent study has some surprising news: Kids in the United States between the ages of 8 and 19 spend seven and a half hours a day on electronic devices. These include computers, smart phones, and video games. Some adults try to advance the idea that these devices waste kids’ time. However, some research surveys say this idea is inaccurate. In fact, the data show that technology can benefit kids.

Critics say that kids stare at computers and TVs all day and do not get enough exercise. The facts stand in counterpoint to this belief. One study compared kids who use media a lot to those who do not. The “heavy” media users actually spent more time in physical activity than “light” media users.

Once study by the National Institutes of Health says that action video games may help increase kids’ visual attention. In addition, using interactive media can give kids good structure for learning. It can also help them learn to switch tasks effectively. Kids also need to use the Web to access information. Many argue that learning to use the Web responsibly sharpens kids’ reasoning abilities.

Today’s word is wired, and not just for fun. The jobs of the future depend on kids who plug in!

**A Source of News for Teens**

For the latest news, teens used to rely on newspapers, television, and magazines. See how many teens now get their news online.

***Electronic media is harming kids.***

Are kids tuning out by tuning in to electronic devices? An alarming report states that young people spend an hour more per day on computers, smart phones, television, and other electronic media than they did 5 years ago. Nearly 7 out of 10 kids have cell phones. Just 5 years ago, 4 out of 10 had them. Are these devices harmless or hurtful to the well-being of young people? A close analysis of several studies shows that there are plenty of disadvantages to these devices.

The Internet is supposed to be a great tool for learning. Do kids who love computers do better in the classroom? To cite one report, access to electronic devices does not automatically bring high marks in school. See the graphs below.

Some argue that the devices get kids involved and help them make friends. Claims like these are incorrect. A study done by the Pew Research Center discusses teenagers’ use of online social networks. Teens do this to keep in touch with friends they already have, not to make new ones. In addition, trying to meet people online can be dangerous.

There are other serious drawbacks to new technology. One issue is multitasking, or trying to do many tasks at the same time. Is it possible to do more than one task at a time well? Some studies say kids’ thinking improves when they do several tasks at once. Still, experts point out that much more research needs to be done on this.

New electronic devices hit stores every year. Kids should know that there is more to the life than what they see on a screen.

Make Connections

Talk about the positive and negative effects of electronic devices on kids. ESSENTIAL QUESTION

What is your opinion of electronic devices? Compare your opinion to the views discussed in the two articles. TEXT TO SELF

**TOEFL Junior:**

automatically (automatic)

compared (comparable)

continue (continual)

devices (device)

high (height)

Internet

issue

media

network

wired(wireless)

**TOEFL:**

access

inaccurate (accurate)

benefit

advance

analysis

articles(article)

compared (compare/ comparable)

incorrect (correct)

devices (device)

drawbacks (drawback)

effective (effect)

institutes (institute)

issue

latest

positive

reasoning (reason)

sharpens (sharpen)

supposed (suppose)

surveys (survey)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 1

Creating a Nation

*Taxes and Protests*

In 1765, King George HI of Great Britain needed money to rule his empire. How could he raise it? With taxes! Parliament, the law-making branch of the British government, passed a new tax called the Stamp Act. Every piece of paper sold in the American colonies had to carry a special stamp. Want to buy a newspaper? Stamp! Pay the tax.

To most colonists, the Stamp Act was unfair. The British had the right to choose representatives to speak for them in Parliament. The colonists had no such right. How could Parliament tax them if they had no voice in government?

The colonists held protests against the Stamp Act. Consequently, it was repealed, or canceled. But more taxes followed. Women protested a tax on cloth imported from Britain. How? They wove their own cloth at home.

Before long, the situation grew worse. In 1770, British soldiers fired into a disorderly crowd in Boston. Five colonists died. This tragedy is known as the Boston Massacre.

By 1773, most taxes had been repealed, or canceled, except the one on tea. One night, colonists held a protest called the Boston Tea Party. Dressed in disguise, they slipped onto three British ships in Boston Harbor and then they tossed the ships’ cargo-tea-overboard.

*Revolution Begins*

An angry King George punished the colonies by ordering the port of Boston closed and town meetings banned. Colonists called these harsh actions the “Intolerable Acts.” However, they could not agree on how to resolve the problems with Great Britain. Patriots wanted to fight for independence. Loyalists wanted peace with the king. Many colonists were undecided.

Finally, colonists called for representatives from each colony to attend a convention. This important meeting, the First Continental Congress, took place in 1774 in Philadelphia. After discussion, the delegates decided to send a peace proposal to the king. Congress ended, but the trouble continued. In April 1775, there were rumors that the British were marching to Lexington and Concord, villages near Boston, to capture weapons that the patriots had hidden there.

The colonial militias were ready. Militias were groups of volunteers willing to fight. British troops attacked. The militias fired back. Surprisingly, the British retreated, or went back.

Now that war had begun, the patriots called for a Second Continental Congress in May. Delegates made George Washington commander of the new Continental Army. Congress also sent another peace proposal to King George.

As war continued, Congress formed committees to do important tasks. Five delegates were chosen to write a declaration of independence. This committee gave the job to one of its members ---- Thomas Jefferson.

Independence Declared

Jefferson knew he had to convince many colonists of the need for independence. As a result, he combined a variety of ideas to make his case. Individuals, he explained, had certain rights. These included life, liberty, and the pursuit of happiness. Governments were created to protect those rights. Instead, King George had taken away colonists’ rights and freedoms. Therefore, the colonies had to separate from Britain.

Congress went on to debate Jefferson’s points. As a result, his strong words against slavery were deleted. There were other compromises, too. But on July 4, 1776, Congress approved the Declaration of Independence. A nation was born. Washington’s army fought on. Finally, in 1778, France joined the fight on America’s side. This was a turning point. In 1781, British troops surrendered in the war’s last major battle. That year, Congress approved the Articles of Confederation. This document outlined a government for the former colonies. The United States was created as a confederation, or a union, of separate states. The Articles gave the states, rather than a central government, the power to make most decisions.

In 1783, King George finally recognized the nation’s independence. By then, though, the United States government clearly wasn’t working very well. The states often didn’t agree with one another.

The revolution had ended. The work of shaping a government had just started. It would continue with a Constitutional Convention in 1787.

Make Connections

Talk about some of the ways American colonists tried to solve their problems with Great Britain. ESSENTIAL QUESTION

Think of a time you tried to solve a problem. How does your experience compare to the colonist’s? TEXT TO SELF

**TOEFL Junior:**

banned (ban)

canceled (cancel)

capture

cargo

continued/ continue (continual)

debate

individuals (individual)

liberty

resolve

slipped(slip)

volunteers(volunteer)

**TOEFL:**

committee (commit)

alliance

approved(approve)

attend

canceled (cancel)

commander(command)

congress

constitutional (constitution)

continental (continent)

convention

debate

delegates (delegate)

deleted (delete)

former

harsh

intolerable (tolerable/ tolerate)

tragedy

unfair

major

proposal

raise

recognized (recognize)

resolve

variety(vary/ various)

volunteers (volunteer)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 2

A Modern Cinderella

Once upon a time ---- the time being the other night ---- the Prince was as joyous as a gamer with the new highest score. He had just danced with an amazing young woman at the Royal Palace. It was during the taping of his weekly TV show, *Dancing with the Prince*. He had only agreed to do the show to help his mother, the Queen, raise money for charity. But when the prince twirled this lovely dancer in the presence of the audience and judges, he felt as if he were floating on a cloud.

However, circumstances changed as soon as the music stopped at midnight. As the applause began, the young woman’s cell phone rang, and she rushed from the palace. All she left behind was a purple sneaker.

The Prince fell into a dungeon of despair. “I must find her again,” he cried, “and in time for tomorrow night’s final show!” How should he search? He clutched the purple sneaker in his hand.

Seeing the Prince’s tears, the Queen advised, “He who consults the right sources will surely succeed. The Prince’s mind raced like a galloping horse on his favorite game, “Horse Chaser.” After much consideration, he made a plan. First, he interviewed everyone who had attended the show, but no one could help. Next, the Prince searched the Internet. He entered the phrase “great dancer with purple shoe,” but he found no one. Then the Prince put up posters of the purple sneaker all over the kingdom’s social network. Yet no one recognized the shoe or knew its owner.

The Prince held the purple sneaker in one hand and his computer compass in the other. “I will continue my quest,” he cried, “even if I must personally travel the entire kingdom.” With that, the Prince powered up his royal electric skateboard and set out!

At the first house, a woman came out to greet the Prince. He held out the sneaker and announced, “This shoe will tell me if you are my destiny.” The excited woman struggled to jam her large foot into the shoe, but the sneaker was much too small.

At the next house, another woman eagerly tried on the sneaker. The shoe flopped and fell off. At every home the Prince visited, the purple sneaker seemed as big as a boat or as small as a seed. Every foot failed to meet his expectations.

As the day wore on, the Prince grew sadder. His discouraged heart was a cell phone in need of recharging. Finally, there was only one house left to visit. When the Prince arrived, three sisters stood in front, offering their feet. (They’d been following the newsfeed.) The shoe fit none of them.

“Does anyone else live here?” a weary Prince asked the sisters. From inside the house came a chime. The sisters’ eyes became narrow slits. A young woman stepped outside and handed a phone to the oldest sister.

The Prince quickly held out the sneaker and requested, “Please try this on.”

She did, and it fit her foot perfectly!

“You’re my missing dancer!” the Prince cried. “Will you be my dance partner forever?”

The young woman smiled and replied, “Thanks, but not right now. I’ll dance tomorrow, but I have a lot of plans. First I want to travel.”

The Prince begged, “Please, say yes! After all, this is a fairy tale, where anything can happen.”

“Sorry, Prince,” the woman said. “You’ll just have to wait.”

“That’s cool,” the Prince sighed, “but at least your name.”

“It’s Cinderella,” the woman replied. She scribbled on a piece of paper. “Here’s my number. “Here’s my number. Let’s stay in touch. TTYLP.”

The Prince looked puzzled and was unsure of how to reply.

“It means Talk To You Later, Prince,” Cinderella explained.

“TTYLC,” the Prince replied as he waved to Cinderella and rode away.

And they texted happily ever after.

Make Connections

Talk about how the Prince got the information he needed. What things did he do? ESSENTIAL QUESTION

When have you had to search for something or someone? How did you search? TEXT TO SELF

**TOEFL Junior:**

advised (advise)

continue (continual)

during (duration)

entered (entry)

favorite (favorable)

highest (height)

Internet

network

number

race

**TOEFL:**

announced(announce)

applause(applaud)

attended(attend)

audience

charity

clutched (clutch)

consults (consult)

destiny

dungeon

eagerly (eager)

joyous

kingdom

offering (offer)

sighed (sigh)

sneaker

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 3

Growing in Place: The Life of E.Lucy Braun

Taking Root

How could two different things have the same name? Emma Lucy Braun might have wondered that as a child. Born in Cincinnati, Ohio, in 1889, Emma shared her first name with her mother. To avoid confusion, she used her middle name, Lucy. Naming things correctly became the basis for her life’s work on plants.

Even as a child, Lucy was interested in plants. She often joined her older sister Annette and their parents on energetic walks through the nearby woods. Lucy enjoyed all the plants and wildflowers. Some seemed to shout at her with their wild colors. Others hid behind rocks and logs.

Lucy asked her mother how to tell all the plants apart. Lucy’s mother taught her to develop her powers of observation. She pointed out the number and shape of leaves on a stem. Lucy kept a record of their observations. She also learned to draw what she saw. Then she could compare and contrast all sorts of plants.

Lucy and her mother gathered specimens for their herbarium, a collection of dried plants. They preserved leaves and flowers between sheets of paper. Lucy became more and more interested in botany, the study of plants. In high school, she started collecting and drying plants for her own herbarium She continued adding plants all her life.

Branching Out

Lucy and Annette attended the University of Cincinnati. Annette wanted to become an entomologist and study insects. Lucy took classes in geology, or the study of rocks and minerals. Her work with geologists transformed how she looked at the natural world. She continued her studies in botany, as well.

Lucy also became interested in ecology. Ecology looks at how living things interact with their environments. Fellow ecologists helped her test an important theory. Lucy believed that plant life in some areas had been able to migrate over time. She mapped this movement back to when glaciers covered those regions with ice!

In Full Bloom

In 1917, Lucy began to teach botany at the University of Cincinnati. She and Annette lived in a house near the woods. Even at home the sisters continued their scientific behaviors. Lucy tended both indoor and outdoor gardens. Annette studied the moths that fluttered in a flurry of wings around lights outside. The sisters named part of their house “the science wing.”

Lucy collected plants from all around the country. She photographed many of them, too. Color photography was still new at the time. Because of that, people enjoyed her lectures and slide shows a great deal.

The Fruits of Her Labor

Later in her life, Lucy wrote many field guides. Field guides are books that identify plants found in a particular area. In 1950, she published her most important guide. It describes the plants in the forests of the eastern United States. Ecologists still use it to study changes in the forests over time.

Today, Lucy has a few plants named after her. One of them, Lucy Braun’s snakeroot, is currently threatened. Lucy’s work in conservation, the protection of nature, may help scientists prevent its disappearance.

Lucy Braun lived to be 81 years old. In her years as a botanist Lucy collected nearly 12,000 plants! Today her herbarium is part of the Smithsonian Institution in Washington, D.C. Visitors can study the plants she collected all her life.

Plant Identification

Become a budding botanist! Follow these steps to identify plants in your area.

Materials: a magnifying glass and a reliable field guide

(1) Identify the state or region and habitat where the plant grows.

(2) Identify whether the leaf is evergreen or broad leaf.

(3) Draw or photograph the leaf to record its shape and other details.

(4) Observe the arrangement of leaves on the stem. See if they are opposite each other or not.

(5) Narrow the list of possible plants in the field guide. Then find an exact match.

Make Connections

Talk about how the advice of Lucy’s mother was helpful to Lucy's study of nature. ESSENTIAL QUESTION

Tell about a collection that you have or might like to start. How could you organize your collection? TEXT TO SELF

**TOEFL Junior:**

advice

avoid

broad (breadth)

compare (comparable)

conservation

continued (continual)

geologists (geology)

high (height)

identification

identify

reliable(liable)

number

slide

tended(tend)

**TOEFL:**

arrangement(arrange)

attended(attend)

avoid

botany

budding (bud)

compare (comparable)

confusion (confused)

conservation

contrast

currently

energetic

identify

transformed (transform)

minerals (mineral)

preserved (preserve)

prevent

reliable

sketches (sketch)

specimens (specimen)

theory(theoretical)

threatened(threaten)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 4

The Magical Lost Brocade

Long ago, in China, a poor woman and her son, Ping, lived in a tiny hut. The woman earned a living weaving beautiful brocade hangings, which her son sold. She wished she could give Ping a better home, but alas, that was impossible. So she decided to weave a brocade of a magnificent house with gardens. At least they could look at something lovely. It took three years to complete the brocade, and it was her finest work. However, soon afterward, a great wind swept into their hut and carried it away! The woman was grief-stricken. So Ping went off in pursuit of the brocade, assuring his mother he would bring it home.

Ping walked for three days and came to a stone house. A bearded man sat outside. “I’m searching for my mother’s brocade,” Ping said.

“A brocade flew by three days ago,” said the man. “Now it’s in a palace far away. I’ll explain how you can get there and lend you my horse.” Ping thanked the man and bowed deeply to express his gratitude.

“First, you must ride through Fire Valley,” said the man. “You must cross over it regardless of the scorching heat, without uttering a word. If you utter even a single sound, you'll bum!” He continued, “After you’ve crossed Fire Valley, you’ll arrive at Ice Ocean. You must ride through the icy waters without shivering. If you shiver even once, the outcome will be terrible! The sea will swallow you up!” The old man paused before concluding, “When you emerge from the sea, you'll be facing the Mountain of the Sun. The mountain is as steep as a straight line up to the sky! The palace sits on top of the mountain, and the brocade is in the palace.”

“It sounds like an extremely difficult journey,” said Ping, “but I’ll do my very best.” He mounted the horse and traveled for three days, reaching the Fire Valley. As he crossed the valley, angry flames leaped out at him. The intense heat brought tears to Ping’s eyes, but he said nothing.

When he reached the other side of the valley, he saw the Ice Ocean. With Ping’s gentle guidance, the horse entered the frigid waters. The sea touched Ping with icy fingers, but he didn’t shiver once. So horse and rider crossed the sea, emerging safely on the other side.

Next, Ping approached the Mountain of the Sun. He rode up the steep mountain, grasping the reins for dear life! Finally, he reached the top and dismounted at the palace door.

A lovely princess welcomed him. “I’m Princess Ling,” she said. “I thought your mother’s brocade was beautiful and wanted to copy it. So I sent a great wind to your home. I’ve now copied the brocade, so please take it home. Have a safe journey.”

“Thank you,” said Ping, who stared at the beautiful princess. She was a perfect rose. He wondered if he could see her again and detected a knowing smile on her face as they said good-bye.

Ping mounted his horse, placing the brocade under his jacket. First, he rode down the steep Mountain of the Sim. Next, he rode back across Ice Ocean, without shivering once. Then he rode across Fire Valley, without making a sound. Finally, he arrived at the home of the bearded man, who sat outside just as he had the previous time. Ping thanked him, returned his horse, and began the long walk home.

Ping arrived home three days later. “Here is your brocade, Mother!” he announced as she cried tears of joy. Together, they unrolled it, and before their eyes, the brocade came to life! Suddenly their hut became a magnificent house with gardens. But that wasn’t all ---- standing before them was Princess Ling! Ping and the princess got married, and a year later, Ping’s mother became a loving grandmother. They all lived happily together in their beautiful home and gardens!

Make Connections

Talk about how having a plan helped Ping accomplish his task. How did following the plan lead to his finding the lost brocade? ESSENTIAL QUESTION

When have you followed a plan in order to accomplish a task? Briefly describe the steps of the plan. TEXT TO SELF

**TOEFL Junior:**

approached (approach)

complete

continued (continual)

entered (entry)

gratitude

swallow

valley

weave

**TOEFL:**

briefly (brief)

announced(announce)

assuring(assure)

bowed (bow)

complete

concluding (conclude)

detected (detect)

finest(fine)

frigid

grasping (grasp)

gratitude

intense

magnificent

outcome

previous

scorching (scorch)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 5

“A Simple Plan”

Each morning when Jack rises,

He schemes a simple plot:

“I think I’ll change the world,” says he,

“A little, not a lot.”

For neighbors he might mow a lawn

Before they know he’s done it,

Or lead a soccer match at school,

And not care which team won it.

Some kids would laugh,

but Jack would smile

And look for more to do.

He’d walk your dog or tell a joke,

Or play a song for you.

Jack’s brother John just didn’t see

What Jack was all about.

John shuddered at Jack’s crazy ways,

But Jack had not one doubt.

Essential Question

What motivates us to accomplish a goal?

Read how two poets describe unusual goals and why they matter.

“Who wants to do another’s chores?”

John asked. “What does it mean,

“I’ll change the world?” You’ve wasting time.

What changes have you seen?”

“Little brother,” Jack explained,

“I used to think like you.

I thought, ‘Why bother?’ and ‘Who cares?’

I see you do that, too.

I’d see some grass not mowed, or else

Kids not getting along,

And in the park no games to play ----

I’d wonder what was wrong.

And then I had to ask myself,

What was I waiting for?

The change can start with me, you see,

That key is in my door.

I’ve memorized a thousand names,

And everyone knows me.

What do you do?” John had to think.

And he began to see.

Now each morning when Jack rises,

He hears his brother plan:

“I think I’ll change the world,” says John,

“If I can’t then who can?”

---- Peter Collier

RESCUE

From the time we heard of the spill ----

a *spill*, as if

someone tipped syrup

onto a tablecloth, as if salt was shaken to the floor ----

my coastal neighbors sailed out, flew

to find the sodden sea birds, bogged down

in waves of oil, a coating so heavy no wing could lift.

From my own canoe I glimpse a head

once downy, but not drowned ----

my heart holds hope!

Reach, lift, and up ----

it beats, this bird’s heart!

I hold the sickened seagull, know:

Just as one spill can spell disaster,

One boat can bring back life.

----Elena Ruiz

Make Connections

Talk about what motivated the speakers in each poem to meet a goal. ESSENTIAL QUESTION

Compare the speakers’ feelings in the poems to the feelings you have when you try to accomplish a goal. TEXT TO SELF

**TOEFL Junior:**

accomplish

essential

glimpse

motivate

simple(simplicity)

spill

**TOEFL:**

beats (beat)

chores (chore)

lawn

plot

rescue

sickened (sicken)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 1

A Reluctant Traveler

“I think packing winter clothes in August is weird,” Paul said, looking from his bedroom window onto West 90th Street. This wasn’t going to be a fun vacation. He was sure of it.

His mom contradicted, “It’s not weird, honey. Argentina’s in the Southern hemisphere, and we’re in the Northern hemisphere, so the seasons are opposite.” To Paul, this was just another reason to want to stay in New York City. Paul wanted to spend the rest of his summer break hanging out with his friends, and not with Aunt Lila and Uncle Art in a faraway country.

Paul’s parents, Mr. and Mrs. Gorski, were teachers, and this was a chance they couldn’t pass up. Their apartment had been covered with travel guides full of cultural information ever since Mrs. Gorski’s sister and her husband had relocated to Argentina six months ago. The Gorskis had big plans. Paul, on the other hand, wanted to sleep late and play soccer with his friends. They lived in a city already. Why were they going to Buenos Aires?

As their plane took off, Paul’s dad said, “Look down there! That’s the island of Manhattan. See? You can even see Central Park!” Paul never realized how completely surrounded by water New York was. Many hours later, as the plane was landing in Buenos Aires, Paul noticed similar outlines of a city on the water, and bright lights, just like home.

“We have so much to show you!” Aunt Lila gushed when they met at the airport. They had a late dinner at a restaurant, just as they often did back home. But the smells coming from its kitchen were new. Uncle Art ordered in Spanish for everyone: *Empanadas* (small meat pies), followed by *parrillada* (grilled meat), *chimichurri* (spicy sauce), and *ensalada mixta* (lettuce, tomatoes, and onions).

Paul made a face. “Don’t be critical, Paul,” his mom said. “Just take a taste.” Though some of the foods were new, the spices and flavors were familiar to Paul.

“Mom, I had something like this at César’s house, Paul said, after biting into an empanada. “This is really good.” As he was complimenting the food, Paul felt his bleak mood improving.

Their first full day in Buenos Aires brought a rush of new sights, sounds, and languages. Paul noticed that like New York, Buenos Aires had people from all over the world. His Aunt Lila remarked, “We speak Spanish, but I really need to be multilingual!”

On a plaza, Paul saw a group of people dancing to music herd never heard. Paul had seen break-dancing on the street, but never dancing like this. “That’s the tango,” Uncle Art said. “It’s the dance Argentina is famous for! Being a soccer player, Paul, I know you have an appreciation for people who move well.”

“You know, that *is* pretty cool,” Paul admitted.

Around noon, they piled back into the car and drove to the most unusual neighborhood Paul had seen yet. All the buildings were painted or decorated in yellow and blue. “Soccer season has started here,” his Aunt Lila said.

“Huh?” Paul asked, wondering if there had been a misunderstanding. “Isn’t it too cold for soccer?” he asked.

“It’s nearly spring. And,” his aunt added, “Boca and River are playing at La Bombonera, the famous stadium, this afternoon.” She held out her hand, which held five tickets to see these big teams play. Paul couldn't believe it.

“We’re in the neighborhood of La Bombonera,” Uncle Art said. “When Boca beats their rival, River, the people decorate their neighborhood in Boca colors!”

“Maybe I could paint my room in soccer team colors!” Paul blurted.

His mom smiled. congratulate you, Paul! You’ve turned out to be a really great traveler.” Paul smiled, too.

Make Connections

Talk about what Paul and his family learned about the culture of Argentina. What did Paul learn about himself? ESSENTIAL QUESTION

What has learning about a different culture taught you? TEXT TO SELF

**TOEFL Junior:**

completely (complete)

decorated (decorate)

drove (driver)

herd

**TOEFL:**

admitted (admit)

appreciation(appreciate)

beats (beat)

bleak

complimenting (compliment)

contradicted (contradict)

critical

familiar(familiarize)

flavors(flavor)

gushed (gush)

reluctant

rival

weird

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 2

Survivaland

“I’m going to win *Survivaland*!” Raul declared as he started the computer game. His immobile character suddenly sprang into action on screen. He raced across the desert island pursued by a sandstorm.

“Not today.” Latrice warned while moving her character on the screen. I’ll be the last player standing on the island!”

Juanita stomped her feet “No way,” she insisted, “I always devise a winning game plan.”

Jackson frowned. “*Survivaland* is too complex,” he complained. “You have to know all about nature to win, but in real life, knowing about nature is just not that important.”

“You are so wrong!” Juanita cried.

A loud *crackle* sounded, and the entire room went dark. When the lights returned seconds later, the four players were very confused. Instead of controlling their characters on the computer screen, they were on the island themselves!

“I can’t believe it ---- we’re inside the game!” Raul exclaimed. “And this sandstorm is blinding me! What should we do?” Suddenly, a large sign in the sky flashed a message: RUN WEST TO ESCAPE THE STORM.

“Which way is west?” Jackson called.

“I know,” Latrice exclaimed, pointing. “The sun is rising over there, and since the sun ascends in the east and sets in the west, west must be in the opposite direction.”

The four players ran until the sandstorm was safely behind them. “Whew, that was close!” Raul gasped with a shortage of breath.

Suddenly Juanita shouted, “No time to relax ---- there’s new trouble overhead!” The group looked up and saw a gigantic butterfly hovering above them. Juanita feared the monster insect might fly down and land on her head.

Just then, Raul spotted onions growing nearby. He quickly pulled one up and smashed it with a stick. He pulled it apart, fashioned four onion pieces, and said, “Rub this all over yourselves. NOW!”

The giant butterfly floated down and rested its feet on Juanita, just as she had feared. She shrieked in fright, and the gigantic insect flew away. “I think my screaming scared it off,” Juanita sighed.

“No, actually, the onion did,” Raul explained. “Because butterflies taste with their feet, I knew that the onion’s bitterness would drive the insect away.”

Jackson looked perplexed. “Huh? Butterflies taste with their feet?” he exclaimed, confused.

“Yes,” Raul replied, “don’t you remember learning that last year in science class?”

“I guess I was daydreaming that day,” Jackson admitted, adding, “Raul, you’re a resourceful friend!”

Then, without warning, an enormous crow flew down and announced, “I’m hungry!” When the huge bird walked close to Jackson, Juanita tore off the silver bracelet and ring she was wearing and threw them as far as she could. The crow raced after the jewelry, and the friends ran the other way.

Even after the bird was out of sight, they kept running, and Jackson called to Juanita, “Why did you throw away your jewelry?”

Juanita explained, “I read in a nature book that crows are attracted to shiny objects, so I knew the giant bird would go after the jewelry instead of me!”

“You see?” Raul said, looking at Jackson. “Knowing about nature has saved us again from our tormentors.”

Finally, the four friends stopped running ---- but not by choice. They accidentally tripped over a tree log and landed in gooey mud that covered their faces, making it impossible for them to see. They heard another loud crackle. When the four wiped the mud away and opened their eyes, they were back in Raul’s game room, in front of the computer screen! All the mud was gone, and the electric blue sky had become four white walls.

“We’re off the island!” Latrice cried. “We survived *Survivaland*, and all of us returned to a normal civilization!”

“So who won the game?” Raul wondered

Jackson declared, “I think we all did ---- but I feel like the biggest winner, because I’ve managed to cultivate a new appreciation for nature.”

“Agreed!” the friends cried, as they wondered what game they might like to play next.

Make Connections

Talk about how the four friends used their knowledge of nature to get out of dangerous situations ESSENTIAL QUESTION

How might you use information about nature to stay safe and healthy? TEXT TO SELF

**TOEFL Junior:**

complained (complaint)

devise

drive (driver)

exclaimed (exclaim)

giant

pursue

race

smashed (smash)

spotted (spot)

stick

**TOEFL:**

civilization (civil)

accidentally (accident)

admitted (admit)

appreciation(appreciate)

ascends(ascend)

character

complaint (complaint)

complex

confused (confuse)

cultivate

desert

devise

enormous

exclaimed (exclaim)

fashioned(fashion/ fashionable)

fright

frowned (frown)

gasped (gasp)

immobile

insisted (insist)

tormentors (torment)

log

monster

perplexed (perplex)

scared (scare)

sighed (sigh)

smashed (smash)

spotted (spot)

stick

survived (survive)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 3

Patterns of Change

Rock Solid

“Solid as a rock” is a saying often used to describe something that’s reliable, that doesn’t change. But, in fact, rocks do change. The effects of water, wind, and temperature over long periods of time slowly transform one type of rock into another type of rock. These same forces also shape awe­inspiring landscapes and sketch designs on rock. Natures patterns are visible in some rocks as small as pebbles and in wonders as vast as the Grand Canyon.

The photograph across these pages shows one example of nature’s art. This structure of rock, known as the Wave formation, is made of sandstone. It is sand turned to rock over a long period of time.

Igneous Rocks

Igneous rocks are one type of rock. They are formed from hot, liquid rock called magma. Magma exists far below the Earth’s surface, but it sometimes escapes to the surface through cracks, such as the mouths of volcanoes. Then, we call it lava.

This molten rock, or lava, is composed of minerals. As the minerals slowly cool, they form crystals. Eventually, the once fiery liquid hardens into a solid substance.

There are many kinds of igneous rock. Their textures and colors come from their crystallized minerals. You may be familiar with granite, which feels rough and comes in many colors. Another variety of igneous rock is obsidian, which is smooth and often black.

Sedimentary Rocks

Igneous rocks do not stay the same forever. Water and wind erode them, carrying away particles of broken rock and depositing them elsewhere. These particles may be left on a beach or riverbank, in a desert or the sea.

Gradually, the particles collect in layers. The contact between the particles and the weight of the layers squeeze out any pockets of moisture or air. Pressed together, the particles form a new material called sedimentary rock. It is formed from many different sorts of sediment. It can include rocks and sand, as well as biological matter, such as plants, bones, and shells.

Just as there are different kinds of igneous rock, there are different kinds of sedimentary rock. Sandstone is formed from sand. Limestone is composed of bones and shells.

Rock Formations

Over time, a layer can be created entirely of one kind of sedimentary rock. Geologists who study rocks call a layer made of the same material and at about the same time a stratum. Another stratum of a different kind can be deposited on top of the first one. The plural for stratum is strata.

Many strata of different kinds of rock can accumulate. Each one will press down on those that came before it. Scientists learn a lot by studying the chronology of layers. The oldest layer will be at the bottom, the youngest at the top.

These layers of sedimentary rock can create dazzling patterns. Each layer will have its own texture and colors. Moreover, water and wind will continue to do their work.

The Rock Cycle

Still, rocks continue to change. There is a third type of rock below the earth’s surface, called metamorphic rock. These rocks are pressed down upon by the layers of rock above them. At the same time, they are heated by the magma beneath them. Eventually, the heat will cause some metamorphic rock to melt and become magma.

As the magma slowly cools, it will turn back into igneous rock. The repetition of this process is called the rock cycle. The rock cycle is a pattern ---- a pattern of change that repeats and continues. It transforms liquid rock into a solid substance. It builds cliffs from sand and bones. And it returns rock to liquid form.

Make Connections

Talk about the patters you can find in sedimentary rocks. Where do you see these patters? ESSENTIAL QUESTION

Compare the patterns of change in rocks with other patterns you have seen. TEXT TO SELF

**TOEFL Junior:**

cliffs (cliff)

continues/ continue (continual)

depositing/ deposited (deposit)

geologists (geology)

grand

reliable(liable)

moisture(moist)

repeat

repetition

**TOEFL:**

accumulate

composed(compose)

crystals/ crystallized (crystal)

dazzling

depositing/ deposited (deposit)

effects (effect)

erode

exists (exist)

familiar(familiarize)

grand

transform

limestone

liquid

minerals (mineral)

moisture(moist)

particles (particle)

process

reliable

rough

sedimentary (sediment)

sketch

squeeze

vast

volcanoes (volcano)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 4

Gulf Spill Superheroes

Fans of comic books know that sometimes it takes a team of superheroes to save the day. Each one uses his or her special powers to fight an enemy or solve a problem. On April 20, 2010, the Deepwater Horizon drilling platform exploded in the Gulf of Mexico. Massive fires raged above the waters. Down below, gallons and gallons of oil spewed from a broken pipeline. Such a huge disaster would require the skills and abilities of many heroes working together.

Responders in the Water

Immediately after the explosion, firefighters worked with the U.S. Coast Guard to battle the blaze. Boats and aircraft transported survivors from the platform to safety before the rig sank.

Meanwhile, scientists raced to understand what was happening underwater. Each type of scientist had a specific function. Oceanographers mapped out the ocean floor and charted water currents in the area. Biologists looked for ways to protect animals in the region from the spreading oil.

What was most important engineers discussed techniques to fix the broken well. The leak was more than a mile below the Gulfs surface. That was too deep for human divers to work effectively. For that reason, experts relied on robots with artificial arms and special tools to stop the spill. Many of their first efforts failed.

After nearly three months, workers finally plugged up the damaged well. It would take many more months to clean up the mess left behind.

Workers move absorbent material to capture some spilled crude oil at Fourchon Beach, Louisiana.

Watchers from the Sky

From the water, it was hard to see where the oil was spreading. Responders had to collaborate with other agencies, such as the NASA space program. Satellites in the sky sent information to scientists on the ground. Meteorologists tracked storms that might pose an obstacle to the response teams. Photographs helped team leaders decide how to assign their workers.

Pilots and their crews flew over the Gulf region in helicopters and planes. Some studied how the oil slick moved from place to place. Others directed the placement of floating barriers to protect sensitive areas. Some crews transferred needed supplies back and forth between land and sea.

Heroes on Land

As the oil approached land, new responders leapt into action. Veterinarians dedicated their efforts to helping out marine animals, such as pelicans and turtles. They would capture and treat affected animals before returning them to the wild. Naturalists and ecologists cleaned up the animals’ habitats. Quite often, these groups’ efforts overlapped and they helped one another. Volunteers also helped out on many tasks.

Local fishermen also needed help. They relied on crabs, shrimp, and other seafood for their livelihood. Government officials monitored fishing areas to decide which were safe. Bankers and insurance companies also reached out to the fishermen. They helped find ways to make pelican to clean and up for the lost income from seafood sales.

In Florida, experts worked together in a “think tank.” They needed to trap floating globs of oil before they ruined area beaches. They created the SWORD, or Shallow-water Weathered Oil Recovery Device. The SWORD was a catamaran with mesh bags hung between its two pontoons. The small craft would mimic a pool skimmer and scoop up oil as it moved. Because of its size and speed, the SWORD could be quite flexible responding to spills.

As we have seen, the Deepwater Horizon accident required heroic efforts of all kinds. In some cases, workers’ jobs were quite distinct. In others, their goals and efforts were similar. The success of such a huge mission depended on how well these heroes worked together. The lessons learned will be quite valuable if and when another disaster happens.

Make Connections

How did people from other locations work together with those responders at the site of the Gulf oil spill? ESSENTIAL QUESTION

How have others helped you achieve a goal? Explain how you all worked together to meet the challenge. TEXT TO SELF

**TOEFL Junior:**

approached (approach)

barriers (barrier)

capture

device

distinct (distinguish)

divers (diver)

exploded (explode)

explosion

gallons (gallon)

insurance

leak

massive

obstacle

race

spill/spills/spilled(spill)

treat

valuable

volunteers(volunteer)

**TOEFL:**

achieve

affected (affect)

assign

challenge

charted (chart)

absorbent (absorb)

barriers (barrier)

collaborate

craft

crews (crew)

crude

currents (current)

dedicated (dedicate)

devices (device)

effectively (effect)

exploded(explode)

explosions(explode)

flexible

forth

immediately(immediate)

trap

leak

marine

massive

monitored (monitor)

naturalists (naturalist)

obstacle

pose

scoop

sensitive

skimmer

spewed (spew)

volunteers (volunteer)

weathered (weather)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 5

What Was the Purpose of the Incas’ Strange Strings



**String Thoery**

***Was the quipu an ancient mathematical calculator?***

Most of us do not do math problems without an electronic calculator. It would be even tougher without paper and pencil. Now imagine adding numbers with a device that looks like a mop! The quipu (pronounced KWEE-poo) was an invention of the Incas, an ancient civilization in South America. Most quipus were not preserved, but about 600 of them still remain intact.

Quipus are made of cotton and wool strings, sometimes hundreds of them, attached to a thicker horizontal cord. Both the archaeologist and the historian have tried to figure out how the quipu works. Here is their solution: Knots were tied to the dangling strings to represent numbers.

The quipus were likely used by Inca officials to record and keep track of data, including statistics on anything from the number of crops produced by a village to the number of people living in a house.

Here is how a quipu would work: Each group of knots on a string represents a power of 10. Depending on their position, knots can stand for ones, tens, hundreds, and thousands. Clusters of knots increase in value the higher they are on the string. As a result, Incas with special training could add up the knots on a string to get the sum. They could also add up the total of many strings or even many quipus.

The patterns of the knots show repeating numbers. When you add it all up, it seems clear that the quipu was nothing less than an amazing low-tech calculator.

**Spinning a Yarn**

***The Incas had a 3-D language written in thread!***

Mystery surrounds the Inca civilization. In its peak era ---- the middle of the 1400s ---- the Incas built thousands of miles of roads over mountains, and yet they had no knowledge of the wheel. They made houses of stone blocks that fit together perfectly without mortar, a bonding material. The biggest mystery may be how the Incas kept their empire together without a written language.

The solution to the last mystery might be an odd-looking object called a quipu. Only a few hundred of these remnants of the Inca culture still exist.

Quipus are made of wool strings that hang from a thick cord. On the strings are groups of knots. Many researchers believe the knots stand for numbers ---- even though no evidence supports this. But others make a strong case that the knots of the quipu were really language symbols, or a form of language.

Researchers found an identical three-knot pattern in the strings of seven different quipus. They think the order of the knots is code for the name of an Incan city. They hope to reconstruct the quipu code based on this and other repeating patterns of knots.

More conclusive proof that the quipu is a language comes from an old manuscript, a series of handwritten pages from the 17th century. It was found in a box holding fragments of a quipu. The author of the manuscript says the quipus were woven symbols. The manuscript even matches up the symbols to a list of words.

The Inca empire covered nearly 3,000 miles. Perhaps the strings of the quipu helped hold it together.

Make Connection

Talk about what historians found by studying the ancient quipu. ESSENTIAL QUESTION

Think about an object that confused you the first time you saw it. How did you find out what it was for? TEXT TO SELF

**TOEFL Junior:**

attached (attach)

decoding (code)

counting (count)

device

higher (height)

knots (knot)

knowledge

number

odd

repeating(repeat)

value

**TOEFL:**

attached (attach)

author

bonding (bond)

civilization (civil)

code

block

clusters (cluster)

conclusive

confused (confuse)

reconstruct

dangling (dangle)

device

fragments (fragment)

horizontal

identical

illustration(illustrate)

peak

preserved (preserve)

pronounced

remnants (remnant)

reveal

statistics

symbols (symbol)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 1

How Mighty Kate Stopped the Train

Chances are y’all have seen a railroad train passing through your neck of the woods. Some of you lucky critters may have even ridden one once or twice. But this here story takes place back in the days when railroads were still pretty new in the American South.

The star of this amazing tale is a young gal that folks around here call Mighty Kate. She got that name at birth, on account of how unbelievably strong she was. After the doctor weighed her on a scale, the tiny babe picked up the doc to see how much he weighed! Deeds like that proved just how mighty Kate was, and her nickname stuck like paper to glue.

Growing up, Mighty Kate continued to impress her family and neighbors with her great strength. When she went walking through the woods, if a boulder was in her path, she never stepped around it. She just picked up that rock, tossed it aside, and sauntered along her way! Once, her pappy’s horse and buggy got stuck in a ditch. Mighty Kate stepped in and pulled them both out ---- with just one hand!

But let’s not get “off track” from the amazing railroad story you really should hear now.

One night, when Mighty Kate was right near 15 years old, a powerful storm struck outside her home. The wind arid rain raged so hard that homes shook in fear, and trees ran for their lives! From her window, Mighty Kate saw a work train crossing Creek Bridge. Suddenly, there was a thunderous crash. The loud noise caused the weeping willows to weep so hard that their tears flooded the entire area!

Mighty Kate ran outside to see what had happened. The bridge, whipped by the storm, had fallen into the creek. So had the train! Kate grabbed a long vine on a nearby plant and slid down to the crash site. She found two railroad workers trapped under a pile of twisted rails. With one push of her arm, she swept away all that mess. Whoosh! ---- the men were free. She yanked each man up with one hand and ascended the vine back up to land with the other hand ---- no exaggeration!

I reckon y’all may be guessing Mighty Kate was done with her heroic deeds for the night. But you’d be wrong.

She knew the 10:30 local train, filled with passengers, would soon be rolling through the area. She had to tell workers at the nearest railroad station to hold the train, since the bridge was out. But the station was an hour away by foot. There was no time to waste!

With the wind and rain attacking her, Mighty Kate set out for the train station. Soon she came to River Bridge, which had somehow managed to stay up in the storm. Kate commenced to cross the bridge. Floodwaters rushed just beneath her feet. Suddenly, she spotted a huge log floating in the river. It was headed straight for the bridge ---- and for Kate!

Mighty Kate leaned over the railing. She stood still, as if posed for a photograph. As the log was about to strike, Kate grabbed it. She began to wring the wood with her bare hands. Pretty soon, that fat, wet log was nothing but a shriveled twig!

After crossing the bridge, Mighty Kate ran straight to the station. When she got there, the passenger train had already left. Kate raced after it along the tracks but couldn’t catch up. Then she got an idea. She whistled loudly ---- so loudly that the engineer heard it and stopped the train.

Kate ran up and told him how Creek Bridge was out. The engineer hugged and thanked the brave young girl who had saved the day.

And because of Mighty Kate’s mighty good idea, today we have whistles on trains to give warnings along the track!

Make Connections

Discuss the way the author told the story of Mighty Kate. Why do you think she told it this way? ESSENTIAL TEXT

What stories do you most like to tell to people? How do you tell them? TEXT TO SELF

**TOEFL Junior:**

continued (continual)

exaggeration (exaggerate)

race

scale

slid(slide)

spotted (spot)

twisted(twist)

**TOEFL:**

commenced (commence)

arid

ascended(ascend)

bare

crash

creek

exaggeration (exaggerate)

grabbed (grab)

trapped (trap)

twig

log

mighty

rolling (roll)

scale

site

spotted (spot)

wring

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 2

Where’s Brownie?

Scene One

***Setting: A two-person bedroom in an apartment. SAM sits at a messy desk, creating a poster. EVAN works at a clean desk. Nearby are an empty terrarium and a paper bag that is wet and tom at the bottom.***

**Narrator:** Whoever claimed that “two heads are better than one” never met my twin sister. Half the time, she makes problems worse rather than better. Like when we lost Brownie, our pet chameleon...

*(ALEX enters. SAM and EVAN quickly cover up their work.)*

**Alex:** How was the science fair? Did everyone like Brownie?

**Sam:** They did. Mr. Rollins was astounded that my exhibit was so good.

*(SAM tries to hide the empty terrarium from ALEX.)*

**Alex:** So where’s Brownie? And why is Evan here?

(EVAN and SAM begin texting on hand-held devices.)

**Alex:** How should I interpret this silence? You’re making me feel suspicious. And where’s Brownie?

**Sam:** Um, Brownie’s missing. But look! Evan and I made these.

*(SAM pulls out a poster she had concealed on her desk.)*

**Sam:** We’ll put them up at school tomorrow.

**Alex:** What makes you think Brownie’s back at school?

**Sam:** Because that’s the last place I saw him. In that bag.

**Alex:** Hey, the bottom of the bag is all wet.

**Sam:** Maybe it got wet in the lobby. Little Nicky was playing in the fountain with his foldy-paper boat thingies.

**Alex:** That’s *origami*, to be precise. Hey! The bag has a rip.

**Sam:** Rip? I didn’t see a rip. Oh, at the bottom.

**Alex:** Follow me. I think I know where Brownie is!

**Narrator:** We raced to the lobby. Brownie had been missing for over an hour, but better late than never!

Scene Two

***Setting: The lobby of the apartment building. A tall, green, potted plant stands next to a small fountain, where NICKY is playing. ALEX, SAM, and EVAN talk to NICK near a bulletin board.***

**Nick:** So these posters are about your lizard, Brownie. I’m still perplexed as to why you think he’s down here.

**Sam:** Because we already checked upstairs.

**Alex:** Brownie’s a chameleon. We think he escaped when Sam set the bag down near the fountain.

**Nick:** Hey, Nicky! Any brown lizards in the lobby?

**Nicky:** Nope.

**Nick:** Maybe you should reconsider this and try searching your apartment again.

**Evan:** Wait a minute, (*checks his device*) It says here that chameleons climb trees.

**Nick:** Nicky! Any brown lizards in that tree?

**Nicky:** Nope.

**Evan:** It also says that chameleons prefer running water, like that fountain.

**Nick:** Nicky! Any brown lizards in the fountain?

**Nicky:** Nope.

**Nick:** What else does that thing say?

**Sam:** Yeah, inquisitive minds want to know.

**Alex:** (*to SAM*) Don’t you want to find Brownie, or are you thinking “out of sight, out of mind”?

**Sam:** He’s just a lizard, Alex. I mean chameleon. It’s not exactly “absence makes the heart grow fonder.”

**Evan:** Listen to this! Chameleons change color to match their environments when they’re confused or afraid.

**Alex:** Of course! Nicky, any GREEN lizards over there?

**Nicky:** (*points into the tree*) There’s just that one.

**Alex:** It’s Brownie!

**Sam:** (*confused*) Brownie has always been brown.

**Alex:** That’s because we put only brown things in his cage, like branches and wood chips.

**Evan:** Maybe you should buy him a green plant.

**Sam:** And a little fountain.

**Nicky:** And boats to go sailing!

**Narrator:** Well, that’s how we found our beloved Brownie, and all was well with the world once more!

Make Connections

How do Alex’s and Evan’s observations help them find Brownie? ESSENTIAL QUESTION

Think about a time in your life when you had to take a second look at someone or something. What changed between your first and second observations? TEXT TO SELF

**TOEFL Junior:**

devices (device)

enters (entry)

interpret

race

suspicious (suspicion)

**TOEFL:**

astounded (astound)

concealed (conceal)

confused (confuse)

reconsider

devices (device)

exhibit

inquisitive

messy

narrator

observations (observation)

perplexed (perplex)

precise

suspicious (suspect)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 3

Frederick Douglass: Freedom’s Voice

Growing Up with Slavery

When Frederick Douglass was growing up in Maryland, he never could have imagined that he would become a great civil rights leader. Born Frederick Bailey, he was enslaved, or living in slavery, until the age of twenty. Frederick’s life was difficult. He never knew his father and was separated from his mother at a young age. If he dared to defy his “master” in any way, he was punished. One of the few bright spots of his youth was being taught to read by the wife of a slave holder. Perhaps it was his love of words, along with his courage, that inspired Frederick to reach for the kind of life he was entitled to have.

A Life-Changing Speech

In 1838 Frederick sought his freedom by escaping to the North. In New York City, he married Anna Murray. Then he and Anna moved to New Bedford, Massachusetts.

In New Bedford, Frederick changed his last name to Douglass to protect himself against slave catchers. That was just the first of many changes. He also discovered a group of people ---- abolitionists ---- who shared his hope of ending slavery. He had read about the abolition movement in William Lloyd Garrison’s newspaper, *The Liberator*. Frederick devoured every issue because the ideas inspired him so much. Soon he began speaking against slavery at the church meetings he attended.

New Opportunities

In 1841, The Massachusetts Anti-Slavery Society held a meeting in Nantucket. Frederick was eager to hear the abolitionist speakers and traveled to the meeting with anticipation. However, when he arrived, something totally unexpected happened. An abolitionist who had heard Frederick speak at a church meeting asked him to speak to this large gathering!

Frederick wait to the front of the meeting hall, trembling with fright. At first, he spoke quietly and hesitantly. He felt anxious standing in front of so many people ---- especially white people! However, once he got started, his fear evaporated. He spoke from his heart, describing the horrors of slavery. Frederick was a stirring speaker, articulate and outspoken. At the end of his speech, the audience’s reaction was spontaneous ---- suddenly everyone stood up and cheered! Among those cheering was none other than William Lloyd Garrison.

After the meeting, Garrison congratulated Frederick and offered him a job as a speaker for the Society. Frederick agreed and was hired as a full-time lecturer. He felt he had found a purpose for his life.

Frederick traveled through New England and the Midwest, giving passionate speeches that captivated audiences. It was impossible to listen to his powerful words and remain neutral. Frederick had a commanding presence and spoke with eloquence and dignity. He was making a name for himself.

Making His Mark

In addition to giving speeches, Frederick had time reserved for his writing. In 1845 he wrote an autobiography, *Narrative of the Life of Frederick Douglass, an American Slave*. The book became a huge success, making him even more famous.

In his autobiography, Frederick revealed that he was a fugitive. For his safety, friends suggested that he go on a speaking tour in Great Britain. Frederick was very popular there, and people lined up to hear him speak.

In 1847 Frederick returned to the United States. By now, he had a family and missed them terribly. Upon his return, they moved to Rochester, New York, where Frederick started his own abolitionist newspaper. *The North Star* was an unusual newspaper. It published articles not only about the antislavery cause, but also about the unequal status of women. Frederick also worked tirelessly to end segregation in Rochester’s schools.

Make Connections

Talk about what Frederick Douglass did to bring about positive change for African Americans. ESSENTIAL QUESTION

When have you worked to bring about positive change? What was the result? TEXT TO SELF

**TOEFL Junior:**

captivated (capture)

entitled (entitle)

horrors (horror)

issue

liberator(liberal)

neutral

spots (spot)

**TOEFL:**

civil

advance

anxious

articles(article)

attended(attend)

captivated (captivate)

defy

depicts (depict)

devoured (devour)

dignity

eager

eloquence

enslaved (enslave)

entitled (entitle)

unequal (equal)

evaporated (evaporate)

fright

horrors(horror)

issue

liberator(liberal)

narrative (narrate)

neutral

offered (offer)

outspoken

passionate

positive

revealed (reveal)

segregation(segregate)

spontaneous

spots (spot)

status

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 4

Power from Nature

Renewable and Nonrenewable Energy

Click! You just turned on a lamp. A faraway power plant most likely supplied the electricity for that lamp by burning coal. Coal, which has to be extracted from deep within the earth, is a natural resource.

Natural resources are nature’s gifts, the riches that exist in the natural world. They include metals and minerals, along with vegetation, soil, and animals in the wild. They include the things that are a necessity for all life ---- water, air, and sunlight.

One important use for natural resources is to provide energy.

Energy makes things work. It runs our cars, computers, heating and cooling systems, kitchen appliances, telephones, televisions, and industrial machinery. Where do we get all this energy? Natural resources serve as energy sources.

Energy sources are divided into two categories. Renewable energy sources ---- such as sunlight and wind ---- can be renewed, or continuously refilled. They do not run out. In contrast, nonrenewable energy sources can be depleted, or used up. Coal, natural gas, and oil ---- also called petroleum ---- fall into this category: Only a limited amount of these substances, called fossil fuels, exists. Nuclear energy is also nonrenewable because it requires uranium. Amounts of uranium are finite, or limited.

From the start of human history, people used renewable energy. For example, sails captured wind to move ships, and wood was burned to cook food. Then, about 150 years ago, human energy needs exploded. New machines required more energy. New ways to harness, or control, energy for use had to be developed. From the 19th century on, most energy has come from nonrenewable sources.

Challenges and Problems

Nonrenewable energy has filled our needs on a huge scale. However, satisfying our energy hunger has been challenging. Supplies of coal, natural gas, oil, and uranium are buried underground. They must be discovered and extracted. Also, human technology is needed to transform natural resources into usable forms of energy. For example, gasoline has to be manufactured from oil and then delivered to customers.

Although nonrenewable energy sources have filled our needs, continuing to use them poses problems. They not only can run out but also can pollute the environment. Burning coal produces gases that can poison the air. Some scientists argue that these gases have heated up our atmosphere. They say global warming will affect our climate so dramatically that glaciers will melt and sea levels will rise.

In addition, it is not just our atmosphere that can be polluted. Oil from spills often seeps into the ocean. Extracting natural gas can pollute a site's surroundings. Nuclear energy creates dangerous waste.

U.S. Energy Use from 1949-2010

*Types of Energy, Percentage of Energy Used by Year (approximate)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SOURCE OF ENERGY | 1949 | 1969 | 1989 | 2010 |
| Fossil Fuels | 91% | 93% | 86% | 83% |
| Nuclear Power | 0% | 1% | 6% | 9% |
| Renewable Energy | 9% | 6% | 8% | 8% |

What are solutions to our energy challenges? We must find some answers. One possibility is a return to renewable energy, which generally causes less pollution than fossil fuels. However, renewable energy is currently expensive and complex to harness on a large scale

Solutions for the Future

Solar power, or power from the sun, shows promise. Solar panels on houses can absorb the sun's energy to provide heat. Nonetheless, because Earth rotates on its axis and circulates in a yearly cycle around the sun, the sun’s energy is less available at certain times and seasons and in different places. It will take innovation and investment to maximize our use of solar power and other renewable energy.

We also can learn to use nonrenewable energy more wisely. Government and private industry have a role to play in protecting our natural resources and in reducing pollution. Moreover, individuals can try to conserve energy. We can remember to turn off lights, TVs, computers, and other devices when we are not using them. Small personal efforts can add up to big changes in our energy future.

Make Connections

Talk about some of the ways natural resources are valuable. ESSENTIAL QUESTION

What ways does the text suggest that individuals can save energy? What are some other things you can do personally to save energy? TEXT TO SELF

**TOEFL Junior:**

approximate

available

captured (capture)

conserve (conservation)

continuously/ continuing (continual)

divided (divide)

expensive (expense)

exploded (explode)

gasoline

individuals (individual)

necessity

provide

scale

spills(spill)

valuable

**TOEFL:**

devices (device)

affect

category

challenge

absorb

approximate

atmosphere

axis

burning(burn)

circulates (circulate)

climate

complex

conserve

contrast

currently

customers (customer)

divided (divide)

exist

exploded(explode)

facility

gasoline

harness

industrial

innovation

transform

manufactured (manufacture)

minerals (mineral)

nuclear

polluted (pollute)

pollution

role

scale

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 5

“How Do I Hold the Summer?”

I thought of ice and barren limbs ----

Last winter’s snow so deep!

I know I cannot ball up light,

And green grass just won’t keep,

So I’ll search for signs of summer,

Hold memories of each ----

Soft plumes of brown pressed in a book,

The pit of one ripe peach,

Each instance of a cricket’s chirp,

And every bird’s sweet call,

And store them up in a poem to read

When snow begins to fall.

---Maya Jones

Catching a Fly

It lighted, uninvited

upon the china plate

next to the peas.

No hand I raised

nor finger flicked

but rather found a lens

framed, focused,

zoomed in, held

the hands, still ----

the appearance of hands,

like two fine threads, caught

plotting, planning ----

greedy goggle eyes, webbed wings

like me, invading ----

but no time to pause, he’d go ----

and right at the last

instead of a swat,

I snapped!

----Ken Kines

WHEN I DANCE

Always wanna break out,

use my arms and legs

to shout!

On any dark day

that doesn’t go

exactly my way ----

I bust a move,

get a groove,

feet feel the ground ----

That slap’s

the only sound

slap, pound

my body needs to charge,

I play my tracks,

I make it large

to take myself away!

Nothing else

I need to say.

---- T.C. Arcaro

Make Connections

Talk about what the speaker of each poem wants to express. How does each express it? ESSENTIAL QUESTION

Compare the forms of expression in the poems to the way you express what is important to you. TEXT TO SELF

**TOEFL Junior:**

focused (focus)

invading (invade)

snapped (snap)

**TOEFL:**

appearance (appear)

barren

charge

chirp

flicked(flick/ flicker)

greedy

invading (invade)

pit

plotting (plot)

ripe

slap

snapped (snap)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 1

Miguel in the Middle

For as long as I can remember, I’ve always been in the middle. I’m the middle child in my family. I’ve always sat in the middle of the classroom in school. Even my first and last names, Miguel Martinez, start with an M ---- the middle letter of the alphabet.

Luckily, Tm also in the middle of a large circle of friends. Most of them are classmates in school ---- well, at least they were until now. You see, I started middle school in September, and the transition from elementary school caused some painful changes for me. All of my closest friends go to a different middle school in the area, because of the way our school district is mapped out. The only classmate I know from my old school is Jake, who’s a genius in math, but since it’s not my favorite subject, we never became friends.

Another big change is that Tm no longer situated in the middle of the classroom. My seat is now in the front row. Also, my new teachers shovel tons more homework at us (especially in math) than we used to get. So you can imagine why my heart wasn’t exactly dancing when middle school began.

By the end of October, Jake and I had become good friends. It happened because I was so hopeless trying to do my math homework. I have a disdain for math ---- especially fractions. To me, fractions are a foreign language ---- I may as well be trying to learn Greek or Latin. So one day, I approached Jake after school.

“Hey, Jake,” I began, “I was wondering if you could ----”

“Help you with the math homework, right?” he said, completing my sentence. “Sure, I’d be happy to help you, Miguel.”

I was stunned because, to be truthful, I wasn’t sure until that moment if Jake even knew my name. And yet here he was, happy to save me from drowning in my sea of math problems.

That night, Jake and I had a study session, and it was time well spent. I must admit that Jake’s a superb math teacher. He used slices of a pizza pie to explain the idea of eighths and sixteenths, arid by the end of the night, I finally understood why eight-sixteenths is the same as one-half!

The next day in class, I was even able to answer one of the math problems our teacher put on the chalkboard. She was surprised when I raised my hand, and guess what ---- so was I!

They say time flies when you’re having fun, and I guess it’s really true. I can’t believe winter vacation is almost here! The school days have been flying by like a jet plane. I suppose it's because Tm a much more focused student ---- especially in math ---- than I ever was before. Until this year, I always looked forward to the prospect of a school break. Now, I actually feel sad that I’ll be away from middle school for two weeks.

The other day, the most amazing thing happened when our teacher gave us a math brainteaser. She asked, “If you wrote all the numbers from one to one hundred, how many times would you write a nine?” The question was harder than it seemed.

Most of the students said ten, although some clever kids said eleven, because they realized that ninety-nine has two nines, not just one. But Jake and I were the only students with the correct answer ---- twenty! Everyone else forgot to count all the nineties.

Jake and I plan to hang out together during winter break. He promised to show me the Math Museum downtown. It won’t just be us, however, since all my new friends from middle school will come, too. You see, even though I now have a completely different perspective on math, some things haven’t changed. I'm still in the middle of a large circle of friends!

Make Connections

Discuss the ways that Miguel changed after entering middle school. What caused him to change? ESSENTIAL QUESTION

When has a new place changed the way you see yourself or the world around you? TEXT TO SELF

**TOEFL Junior:**

approached (approach)

completely (complete)

count

during (duration)

favorite (favorable)

focused (focus)

number

**TOEFL:**

admit

amazing (amaze)

arid

correct

disdain

elementary

even

fractions (fraction)

transition

perspective

prospect

session

stunned (stun)

superb

suppose

brainteaser(tease)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 2

The Day the Rollets Got Their Moxie Back

Sometimes, the thing that gets you through hard times comes like a bolt from the blue. That’s what my older brother’s letter was like, traveling across the country from a work camp in Wyoming. It was 1937, and Ricky was helping to build facilities for a new state park as part of President Roosevelt’s employment program. Though the program created jobs for young men like Ricky, it hadn’t helped our dad find work yet.

I imagined Ricky looking up at snow-capped mountains and sparkling skies, breathing in the smell of evergreens as his work crew turned trees into lumber and lumber into buildings. It almost made an 11-year-old weakling like me want to become a lumberjack.

Back in our New York City apartment, the air smelled like meatloaf and cabbage. Dad sat slant-wise in his chair by the window, obviously trying to catch the last rays of sunlight rather than turn on a light. My older sister Ruth and I lay on the floor comparing the letters Ricky had sent us. “Shirley, Ricky says they had a talent show, and he wore a grass skirt and did a hula dance while playing the ukulele!” Ruth reported with delight. “I’ll bet he was the cat’s pajamas!”

“It’d be swell to have our own talent show! I replied.

“Should I start sewing grass skirts?” Mom asked from the kitchen, which was just the comer where someone had plopped down a stove next to a sink and an icebox. “Now come set the table. Dinner’s almost ready.”

Dad stayed where he was, sullen and spent. “Any jobs in the paper?” Mom asked, her voice rich with sympathy. Dad shook his head no. He had worked as an artist in the theater for years, but most productions were still strapped for cash. Dad sketched posters for shows that did get the green light, just to keep his skills sharp. He even designed posters for “Rollet’s Follies,” with Ruth and me depicted in watercolor costumes.

For dinner, Mom served a baked loaf of whatever ingredients she had that worked well together. From the reddish color, I could assume that she had snuck in beets. “I guarantee you'll like these beets,” she said, reading my frown. “It’s beet loaf, the meatless meat loaf,” she sang as she served up slices.

Ruth fidgeted in her seat, still excited about the talent show. Though calm on the outside, inside I was all atwitter, too.

Over the next week, Ruth and I practiced our Hawaiian dance routine. Our parents worried about heating bills as cold weather settled in. One Saturday, my father decided to grin and bear it, and grab some hot coffee at the local soup kitchen, where he hoped to hear about available jobs. Ruth and I begged to go along. Since the kitchen offered doughnuts and hot chocolate on weekends, he agreed.

Most everyone in line was bundled up against the cold. Many of us had to rely on two or three threadbare layers. Like many other men, Dad bowed his head as if in shame.

The line moved slowly. Bored, Ruth began practicing her dance steps. I sang an upbeat tune to give her some music. Around us, downturned hats lifted to reveal frowns becoming smiles. Soon, folks began clapping along. Egged on by the supportive response, Ruth twirled and swayed like there was no tomorrow.

“Those girls sure have moxie!” someone shouted

“They’ve got heart, all right!” offered another. “Why, they oughta be in pictures!”

“With performances like that, I’d nominate them for an Academy Award!” a woman called out.

“Those are my girls!” Dad declared, his head held high.

Everyone burst into applause. For those short moments, the past didn’t matter, and the future blossomed ahead of us like a beautiful flower. I couldn’t wait to write Ricky and tell him the news.

Make Connections

Talk about ways that Ricky, Ruth, and Shirley helped each other adapt to the times. ESSENTIAL QUESTION

Think about a time when others helped you adapt to a new situation. How did your experience compare with the Rollet family’s? TEXT TO SELF

**TOEFL Junior:**

adapt

available

award

bundled (bundle)

comparing (comparable)

high (height)

**TOEFL:**

academy

adapt

assume

applause(applaud)

bear

bill

bowed (bow)

comparing (comparable)

costumes (costume)

crew

depicted (depict)

facilities (facility)

frown

grab

guarantee

nominate

obviously (obvious)

reveal

routine

shame(shameless)

sharp(sharpen)

sketched (sketch)

slant

strapped (strap)

sullen

swell

talent

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 3

Forests on Fire

A few years ago, several red squirrels ---- an endangered species ---- had a temporary home at the Phoenix Zoo. Rescued from a ravaging wildfire that had already destroyed thousands of acres of land, the squirrels were waiting for the fire to be extinguished before being returned to the wild. Forest fires are part of nature, so it is important for us to understand not only how to fight fires, but also why they occur.

Destructive and Productive

Like rainstorms, wildfires are a force of nature. However, unlike rainstorms, wildfires are almost always destructive. They consume everything in their way, including plants, trees, and animals. Sometimes, they take human lives and homes as well.

Like a big storm, the destructive power of wildfires is terrifying. On the other hand, naturally occurring wildfires are also productive forces. Whether their flames race through a forest, a prairie, or acres of brush, these fires produce necessary changes in their environment. Like rain, they can allow new life to flourish.

Benefits of Naturally Occurring Wildfires

A naturally occurring wildfire, sometimes called a forest fire, happens without any human cause. Three factors must be present for one to burn. These include fuel, such as dry grasses; oxygen, which is in our atmosphere; and a heat source to ignite the fuel. A lightning strike usually sparks a naturally occurring wildfire. The danger of fire is highest during a drought, when an area has experienced little rain.

Wildfires have happened throughout history, and they help to regenerate Earth and its species. When vegetation decays, wildfires clear it away so that new plant life can grow.

Fire also releases nutrients back into the soil, making it more fertile. And by eliminating leafy canopies of mature trees, fire allows nourishing sunlight to reach a forest floor.

Often, this new plant life will be better adapted to fire than what existed before. Some species will have fire-resistant roots, leaves, or bark. Other species will actually depend on fire to reproduce and thrive.

Stability and Diversity

Among its benefits, fire promotes stability. By eliminating invasive species that can take over an area, fire encourages the healthy growth of a region’s own vegetation.

At the same time, fire promotes diversity. It ensures that plant life will exist at different stages of development. For example, a forest recently struck by fire will have new seedlings. Not far away, in a forest struck by fire twenty years earlier, there may be small trees. And nearby, there may be a forest of mature trees, untouched by fire for years.

These variations in plant life provide food and habitats for different kinds of insects, birds, and mammals. Woodpeckers eat insects in burned-out trees. Sparrows depend on seeds for food. Predators such as foxes are drawn by small prey. Forests at different stages attract a diversity of animals to a region.

The Human Factor

Although wildfires have benefits, they also are feared and misunderstood. As a result, our government tried to suppress them completely throughout the 20th century. This policy had a negative impact on the environment. The gradual buildup of decayed vegetation provided more fuel to feed fires. Consequently, wildfires became noticeably fiercer.

More recently, the government has used two different strategies to manage wildfires. One is to try to limit fires before they burn out of control. The other is to set small “prescribed” fires to reduce the amount of fuel in the environment. Hopefully, the danger of catastrophic fires is now receding.

Unfortunately, human carelessness, such as a campfire left to smolder, also can start a fire. While a natural or prescribed wildfire can be beneficial, this is not true of fires that result from malice or mistakes. These happen at times and places that may cause irreparable damage to plant, animal, and human life. Fires cannot control themselves, so humans will always have to figure out how best to handle them.

Make Connections

Talk about how wildfires change the environment for plants. ESSENTIAL QUESTION

Why is it important for you to be careful around a fire of any kind, even in a home? TEXT TO SELF

**TOEFL Junior:**

adapted (adapt)

completely (complete)

consume

destructive

diversity (diverse)

during (duration)

fertile

regenerate (generate)

highest (height)

invasive (invade)

mature

necessary

prescribe

provided (provide)

race

resistant (resist)

temporary

**TOEFL:**

adapted (adapt)

benefit

atmosphere

beneficial

cones (cone)

consume

decayed/ decays (decay)

destructive(destroy)

diversity (diverse)

drought

endangered (endanger)

extinguished(extinguish)

fertile

unfortunately (fortunate)

regenerate (generate)

ignite

impact

invasive (invade)

malice

mammals (mammal)

oxygen

promotes (promote)

recently

reduce

reproduce

rescued (rescue)

resistant (resist)

scatter

sprout

stability

terrifying(terrify)

thrive

variations(variation/ vary)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 4

Changing Views of Earth

On the Ground, Looking Around

No matter where on Earth you go, people like to talk about the weather. This weekend's forecast may provide the main criteria for planning outdoor activities. Where does all that information about the weather come from? The ability to predict storms and droughts required centuries of scientific innovation. We had to look up at the skies to learn more about life here on Earth.

Long ago, humans based their knowledge on what they experienced with their eyes and ears. If people could heighten their senses, they might not feel so mystified by the events confronting them daily. For example, something as simple as the rising sun perplexed people for centuries. They believed that the Earth stayed in place while the Sun moved around it. This was called the geocentric model.

In the early 1600s, an Italian named Galileo pointed a new tool called the telescope toward the night sky. As a result of his heightened vision, he could see stars, planets, and other celestial spheres with new clarity. Each observation and calculation led him to support a radical new model of the solar system. In the heliocentric version proposed by the scientist Copernicus, the Sun did not orbit the Earth. The Earth orbited the Sun.

In the Sky, Looking Down

New technology allowed scientists to evaluate theories better than ever. Measuring devices such as the thermometer and barometer offered new insights into weather patterns. However, people were still limited to ground-based learning. What if they could travel into the sky, where the weather actually happened

In the mid-1700s, some scientists sent measurement devices higher and higher. At first they used kites. Before long, hot-air balloons offered new ways to transport the tools ---- and sometimes scientists themselves ---- into the sky.

However, scientists were not satisfied studying the lower layers of Earth’s atmosphere. The more they learned, the higher they wanted to go. They also wanted to obtain information more quickly and accurately. Kites and balloons were hard to control. As a result, they occasionally veered off course or got lost, taking their data with them.

The development of aircraft in the early 1900s promised safer ways to observe Earths surface and the atmosphere above it. Kites and balloons could reach altitudes of approximately three kilometers. By comparison, airplanes lifted scientists to a height of five kilometers and more. Radio technology allowed scientists to transmit data from the air to the ground, where other scientists analyzed and compared information. Breakthroughs came fast and furiously. Still, scientists dreamed of reaching ever higher.

Out in Space, Looking Back Home

In the late twentieth century, advances in aeronautics led to more powerful rockets that lifted satellites into orbit around Earth. From these heights, scientists could study the composition and relative thinness of our layered atmosphere. Since meteorologists could analyze multiple factors at once, the accuracy of their weather predictions improved dramatically.

NASA launched dozens of satellites into orbit in the following years. Some stared back at Earth, while others peered deep into endless space. They gathered astronomical data about the ages of planets and galaxies. Sensors and supercomputers measured things such as Earth’s diameter with incredible accuracy. Because of this technology, scientists could develop more reliable models about Earth’s systems. For example, they could form theories to show how climate might change over time.

Space missions continue to venture farther from home. Even so, nothing compares to seeing Earth the old way, with our own eyes. Views of our planet from space inspire awe in nearly all people who have seen them, even in photographs. “With all the arguments... for going to the Moon.” said astronaut Joseph Allen, “no one suggested that we should do it to look at the Earth. But that may in fact be the most important reason.”

Make Connections

What were some effects of flight on our knowledge about Earth? ESSENTIAL QUESTION

How has your knowledge of Earth changed over time? What effect has this change had on you? TEXT TO SELF

**TOEFL Junior:**

approximately (approximate)

comparison/ compares/ compared (comparable)

continue (continual)

devices (device)

evaluate

heights/ heighten/ heightened/ higher (height)

knowledge

reliable(liable)

number

provide

simple(simplicity)

solar

**TOEFL:**

accurately (accurate)

analyzed (analyze)

approximately (approximate)

advances (advance)

astronomical/astronaut(astronomy)

atmosphere

awe

barometer

celestial

climate

comparison/ compares/ compared (comparable)

composition (compose)

devices (device)

diagram

diameter

droughts (drought)

effects (effect)

endless

evaluate

furiously (furious)

incredible

innovation (innovate)

launched (launch)

obtain

occasionally (occasional)

orbited (orbit)

perplexed (perplex)

planets (planet)

proposed (propose)

radical

reliable

solar

theories(theory/ theoretical)

thermometer

veered(veer)

venture

version

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 5

Should Plants and Animals from Other Places Live Here?

**New Arrivals Welcome**

***Nonnative species are good for the economy ---- and they taste good, too!***

Some of America's most important immigrants are plants and animals. Called normative species, these creatures arrive here from other regions or countries. Nonnative species are known as *invasive* when they harm the environment, our health, or the economy. Invasive species often take over a widespread area and overwhelm native wildlife. The population of some native species has declined because of a few newcomers, but the news is not all bad. We would be a lot worse off without some of them.

In Florida, for example, about 2,000 species of familiar plants and animals are nonnative. These include oranges, chickens, and sugarcane. In fact, 90 percent of farm sales can be traced directly to nonnative species.

Nonnative species help to control insects and other pests that harm crops. Some scientists identify a pests natural enemy and bring in nonnative enemy species, such as insects, to kill the pests. Killing the pests is a good thing, and an even better result is that pesticide use is reduced. Vedalia beetles were transported here from Australia to eat insects that killed citrus fruit. The beetles completed their mission without any side effects. They also help keep citrus farmers in business!

Not all new arrivals benefit humans. However, many nonnative species are just what the doctor ordered. Many of the dogs and cats we love so much originated in other parts of the world. Would you want to ban Labrador retrievers and Siamese cats? Creatures like these surely make our lives and our nation better!

**A Growing Problem**

***Thousands of foreign plant and animal species threaten our country.***

Visitors to the Florida Everglades expect to see alligators, not pythons. These huge snakes are native to Southeast Asia. But about 150,000 of the reptiles are crawling through the Everglades. The probable reason they got there is that pet owners dumped the snakes in the wild. Now the nonnative pythons have become a widespread menace, threatening to reduce the population of endangered native species.

Some nonnative species may be useful, but others are harmful to the nation. It costs the U.S. $137 billion each year to repair the damage these species cause to the environment. The trouble occurs when nonnative species become invasive. Invasive species are a nuisance just about everywhere in the nation. For example, the Asian carp, which was introduced unintentionally to the U.S., has been able to thrive in the Mississippi River and now threatens the Great Lakes ecosystem. Because of its large appetite, the population of native fish has gone down.

Some germs are also invasive species, and they are especially harmful to humans. One, the avian influenza virus, came to the U.S. carried by birds. This microbe can cause a serious lung disorder in infected people.

Some agricultural experts have introduced nonnative species on purpose to improve the environment. However, this can sometimes create unexpected problems. A hundred years ago, melaleuca trees were brought to Florida from Australia to stabilize swampy areas. Now millions of the trees blanket the land, crowding out native plants and harming endangered plants and animals.

The facts about this alien invasion lead to one conclusion: We must remove invasive species and keep new ones from our shores.

TIME FOR KIDS

Nonnative Species: Benefits and Costs

Over the years, about 50,000 nonnative species have entered the U.S. These four examples show the positive and negative impacts they can have.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SPECIES | NATIVE LAND | WHEN AND HOW INTRODUCED TO U.S. | POSITIVE IMPACT | NEGATIVE IMPACT |
| Horse | Europe | Early 1500s, on purpose | Used for work, transportation, and recreation | Made large-scale wars possible |
| Kudzu | Asia | Early 1800s, on purpose | Stops soil erosion | Crowds put native plants |
| Olives | Middle East and Europe | Early 1700s, on purpose, cultivation began in 1800s | Major food and cooking oil source, important industry in California | Most olives must be imported because they do not grow everywhere. |
| Mediterranean Fruit Fly | Sub-Saharan Africa | 1929 (first recorded), accidentally | May be a food source for creatures such as spiders | Destroys 400 species of plants, including citrus and vegetable crops |

This community is trying to control the invasive melaleuca plant that has taken over this marsh.

Make Connections

Talk about the uses and harmful effects of species introduced into the United States. ESSENTIAL QUESTION

Would you give up eating or using a species if you discovered it was nonnative? Explain your reasons. TEXT TO SELF

**TOEFL Junior:**

appetite

ban

completed (complete)

declined (decline)

dumped (dump)

entered (entry)

identify

invasion/ invasive (invade)

nuisance

remove(removal)

scale

virus

**TOEFL:**

community

accidentally (accident)

alien

conclusion (conclude)

cultivation

declined (decline)

directly (direct)

effects (effect)

endangered (endanger)

erosion

familiar(familiarize)

identify

immigrants(immigrate)

impacts(impact)

infected (infect)

invasion/ invasive (invade)

traced (trace)

menace

originated (originate)

recreation

reduced (reduce)

retrievers (retrieve)

scale

stabilize

threaten

thrive

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 1

Shipped Out

My name is Libby Kendall, and I am a prisoner of war. Well, not really, but some days it feels that way. Just like my dad, I’ve packed up my things and shipped out. Unlike my dad, however, nothing I do will ever help the Allies win World War II.

My father is a mechanic on a battleship in the Pacific Ocean. I’m trapped in a little apartment above my Aunt Lucia’s bakery downtown. Mom says it's just for a few months while she works double shifts at the clothing factory. She makes uniforms, mostly sewing pockets on jackets. I asked her once if she snuck things into the pockets for soldiers to find, like little poems written in calligraphy. She said soldiers wore jackets with pockets to hold tools they might need for war survival, not silly things like poetry.

It seems no one appreciates my creative contributions to the war effort, but Aunt Lucia says my help to her is important, since both her workers joined the army.

On my first day with Aunt Lucia, she explained the daily operations of the bakery. First, we get up before dawn to knead the dough. Next, we bake breads and muffins. Then, while I help customers, Lucia makes cakes and cookies for sale in the afternoon. Whenever the phone rings, she races from the back room to intercept the call. She’s always worried that it might be bad news, so she wants to be the first to hear it.

After dinner, Aunt Lucia invites neighbors over to listen to the radio. Some are immigrants from a wide diversity of backgrounds. Lucia and others help translate the news into several languages for everyone to understand. I always listen closely for any bulletin about fighting in the Pacific.

I remember how intently my parents read reports about the war, which I rarely understood. They often whispered to one another, and I’d shout out something like, “Speak up! I can’t hear you!” They’d frown and leave me alone to talk in private.

One night, they came into the living room and turned off the radio. At first I was angry, but they had serious expressions on their faces. “Our country’s at war,” Dad said. “The military will be looking for new recruits. I know something about boats and ship engines, so I intend to join the navy.”

My face grew hot, but my hands felt cold. “You can’t just leave,” I said. I stomped on the floor for emphasis and stormed off to my bedroom. Looking back on that now, I feel ashamed of how selfishly I had acted.

This morning, Aunt Lucia can tell I’m feeling down. She asks me to help her decorate cupcakes for a fundraiser tonight. At first I’m not interested. I just slather on frosting and plop a berry on top. Then I realize that I can make red stripes out of strawberries and a patch of blue from blueberries. Soon I have a whole tray of cupcakes decorated like flags to show Aunt Lucia.

“These are wonderful!” Lucia says. “I’m sure they'll sell better than anything else!”

For the first time in weeks, I feel like I’ve done something right. I think of all the money we might make at the sale, and how it may buy supplies for my father.

“I enlisted in the navy to help restore democracy in the world,” my dad said on the day he left. “Now you be a good navy daughter and sail straight, young lady.” I promised I would. As he went out the door, I slipped a little poem into his coat pocket. “Here’s a little rhyme to pass the day,” it said. “I love you back in the U.S.A.!”

I look at the cupcakes and wish I could send one to my dad. Instead, I’ll draw a platter on which they’re piled high and send the picture off to the Pacific with a letter. That way, my dad will have plenty to share with everyone there.

Make Connections

What kinds of contributions to the war effort do characters make in this story? ESSENTIAL QUESTION

Think about an event in your own life that required contributions from others. How did they all work together? TEXT TO SELF

**TOEFL Junior:**

decorated (decorate)

diversity (diverse)

emphasis

high (height)

race

slipped(slip)

**TOEFL:**

appreciates(appreciate)

character

customers (customer)

democracy

diversity (diverse)

enlisted (enlist)

frown

immigrants(immigrate)

intercept

trapped (trap)

recruits (recruit)

restore

selfishly(selfish)

ashamed(shameless)

silly

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 2

The Bully

Michael saw the trouble coming from all the way at the end of the school hallway. There standing by the stairs was J.T., the school bully who enjoyed taunting anyone he felt like at any given moment. J.T. was tall and strong, so few of his victims were willing to stand up to him and defend themselves. Michael hated the idea that he let J.T. get away with these offenses. Yet like most of the other kids who were picked on, he just took it quietly and waited for the unpleasant moment to pass.

J.T. walked directly toward Michael, his eyes locked on the books that Michael carried under his arms. When they met in the middle of the hallway, J.T. stopped abruptly and snapped at Michael, “Hey, let me see those books!” A group of students watched as Michael held out the books he was carrying, trying not to tremble to reveal how nervous he was.

J.T. grabbed a math book, looked inside for a second, and then shoved the book at Michael, who dropped all the books he held. “Hey, those books are school property,” J.T. barked, “so don’t let them fall to the floor!” Then he walked away, laughing loudly.

Michael, his cheeks turning red, half kicked the fallen books. Suddenly a hand appeared beside Michael and picked up an adventure novel as it slid away. “You look like you could use an ally,” a friendly voice said with a laugh.

Michael turned around and saw that it was Ramon. He was the school’s star baseball player, basketball player, and everything-else-player you could name. Michael couldn’t believe that Ramon was stopping to help him. The two had barely spoken to each other since the school year began.

“Thanks,” Michael sighed with relief. “It’s so confusing. I don’t know what his problem is.”

“I’ve been watching you in the halls,” Ramon said, “and as I see it, you need to find a way to end this conflict with J.T.” Michael nodded, stuck for what to say. “Well,” Ramon continued, “I can tell you what my grandmother used to tell me whenever I had a problem with someone. She’d say, ‘You can catch more flies with honey than with vinegar.’”

Looking puzzled, Michael asked, “What does that mean?”

“It means that being kind to your enemies may be more effective than being angry at them,” Ramon explained.

“What if you just intervene and tell J.T. to stop picking on me?” Michael suggested. “I think he’d leave me alone if you threatened him.”

“That’s vinegar,” Ramon laughed as he walked away. “Try honey instead.”

That night, Michael thought about the advice that Ramon had given him. It sounded like a good plan, but deep down Michael wasn’t very confident that it would actually work with J.T.

The next day in school brought Michael’s usual misery. There stood J.T., and Michael knew it would be just a matter of seconds before the two of them collided in the middle of the hall.

As J.T. came nearer, Michael wished he had Ramon’s protective arm to stop the bully from attacking. Then, suddenly, the unexpected happened. J.T. accidentally tripped. He fell down, and his own armful of books went flying across the floor.

For a moment, all was silent. The crowd of students in the hallway froze, waiting to see what J.T. would do next. As J.T. slowly stood up, Michael had an idea. He bent down, quickly picked up J.T’s books from the floor, and offered them to him.

Michael said, “You look like you could use an ally.”

J.T. was speechless, completely thrown by Michael’s act of kindness. He took the books and muttered quickly, “Uh, thanks.”

As J.T. walked away, Michael caught Ramon in the comer of his eye. Ramon gave him a big smile and a “thumbs-up, ““My grandmother would be proud of you,” Ramon said.

“It’s just honey,” Michael grinned. hope it sticks.”

Make Connections

Talk about how Ramon’s advice affected Michael’s problem with J.T. ESSENTIAL QUESTION

What advice would you give to someone being bullied? Give reasons to support your opinion. TEXT TO SELF

**TOEFL Junior:**

advice .

collided (collision)

completely (complete)

continued (continual)

snapped (snap)

slid (slide)

sticks (stick)

**TOEFL:**

affected (affect)

ally

barely (bare)

bent

confident

defend

effective (effect)

grabbed (grab)

intervene  
tremble

misery

nodded (nod)

reveal

shoved(shove)

sighed (sigh)

snapped (snap)

sticks (stick)

taunting(taunt)

threatened(threaten)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 3

Mysterious Oceans

Deep Diving

It has no mouth, eyes, or stomach. Its soft body is encased in a white cylinder and topped with a red plume. It can grow to be eight feet tall. It is a sea creature known as a giant tube worm, and it lives without any sunlight on the deep, dark ocean floor.

What we sometimes call the deep ocean, in contrast to shallow waters, covers almost two-thirds of Earth’s surface. On average, oceans are about two miles deep. However, the deepest point known on Earth, Challenger Deep, descends nearly seven miles.

Some deep ocean fish are swimming among tube worms. New ocean species are being discovered all the time.

The ocean’s floor is varied, consisting of vast plains, steep canyons, and towering mountains. It includes active, dormant, and extinct volcanoes. This undersea world is a harsh environment because of its frigid temperatures and lack of sunshine.

The deep ocean is also a mysterious environment that remains largely unexplored. Little is known about it or its creatures. Do any of them cache food the way land animals do? Do any ocean species hibernate? As one example among countless mysteries, not a single, live giant squid had ever been spotted until a few years ago. We knew they existed only because their corpses had been found.

Amazing Adaptations

When a submersible, or submarine, was invented that could descend farther than any other craft, scientists were then able to make the odyssey to the deep ocean floor. However, exploration remains difficult, and they have since seen merely five percent of the underwater world.

As scientists anticipated, life generally seems sparse at the bottom of the deep ocean. Few creatures can survive there. Food sources that sea creatures depend on, such as dead plants and animals, rarely drift down from the ocean’s surface. As a result, animals have to adapt to an environment that is not only frigid and dark but also has little food.

One example of an adaptation to this environment is seen in the starfish. Deep sea starfish grow larger and more aggressive than their shallow water relatives. They can’t afford to wait for an occasional snail to pass by. Instead, deep sea starfish are predators that actively forage for food. They reach up their five arms, which have pincers at the ends, to catch meals of agile, fast-moving shrimp.

Anglerfish also are adapted to the herculean task of finding scarce food. Each has a bioluminous, or naturally glowing, lure on the top of its head. This shining pole is sensitive to vibrations and allows them to attract other fish. With their huge jaws, they quickly seize their prey.

Heated Habitats

What has truly surprised scientists, however, is the discovery of another, very different type of environment on the deep ocean floor. They found that cracks, or vents, in Earth’s surface exist underwater, just as they do on dry land. Sea water rushes into these vents, where it mingles with chemicals. The water is also heated by magma, or hot melted rock. When the water from the vent bursts back into the ocean, it creates geysers and hot springs.

To scientists’ amazement, the habitats around these vents teem with life. In addition to tube worms, there are huge clams, eyeless shrimp, crabs, and mussels, along with many kinds of bacteria. One odd creature is the Pompeii worm. It has a fleece of a bacteria on its back that, as far as scientists can determine, insulates it from heat.

How can so much life exist where there is so little food or sunlight? Scientists have discovered that many creatures transform the chemicals from the vents into food. The process is called chemosynthesis. Because of this process, animals are able to flourish in these remarkable habitats. Creatures that don’t use chemosynthesis for food, such as crabs, eat the ones that do.

There are many mysteries to be found and solved at the bottom of the deep sea. In the last few decades alone, scientists have discovered more than 1,500 ocean species! If scientists continue sea exploration, they are bound to discover many more.

Make Connections

Talk about the ways some sea creatures adapt to the deep ocean. ESSENTIAL QUESTION

Compare one sea creature adaptation to that of another animal you have seen. TEXT TO SELF

**TOEFL Junior:**

adapted/ adaptation/ adaptations (adapt)

continue (continual)

countless

decades (decade)

descends (descend)

diving (dive)

drift

giant

merely(mere)

odd

remarkable

spotted (spot)

vibrations(vibrate)

**TOEFL:**

adaptation (adapt)

anticipated (anticipate)

challenger (challenge)

aggressive

agile

bound

contrast

corpses (corpse)

countless

craft

dormant

existed (exist)

explored(explore)

extinct

frigid

harsh

towering (tower)

transform

lures (lure)

mysterious

occasional

process

remarkable

scarce

seize

sensitive

spotted (spot)

teem

varied(vary/ various)

vast

vibrations (vibrate)

volcanoes (volcano)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 4

Words a Save the World: The Work of Rachel Carson

Sometimes, the quietest voice can spark the most clamorous outrage. Combining her love of nature with a belief in scientific accuracy, the soft-spoken writer Rachel Carson raised awareness about environmental issues. As a result, the U.S. government strengthened the rules and regulations regarding the use of chemical pesticides. Many people consider Rachel’s book *Silent* Spring the foundation of today’s environmental movement.

Early Influences

Rachel was born in Springdale, Pennsylvania, in 1907. Throughout her childhood, her mother encouraged her to explore the landscape surrounding the family's farm. Often equipped with binoculars, Rachel developed a love of nature that affected many of her decisions. For example, she first chose to study English literature and writing when she went to college. However, she later decided to study biology. While studying at a marine laboratory, she became fascinated by the glistening and shimmering seascape.

From an early age, Rachel had loved to write. These writing skills proved useful to her career. She began by creating radio programs for the U.S. Bureau of Fisheries.

She then became an editor and librarian for the agency. While she was working, she submitted her own articles to newspapers and magazines. Rachel eventually published three books about the ocean and its native plants and animals. This trilogy included *Under the Sea-Wind, The Sea Around Us, and The Edge of the Sea*.

A Call to Action

The success of Rachel’s books allowed her to devote more time to her own projects. She built a cottage close to the sea on the coast of Maine. Soon, however, a letter arrived from some old friends, Olga and Stuart Huckins. They described problems resulting from the spraying of DDT on their private wildlife sanctuary. Chemical companies had developed DDT as an effective solution to crop-eating insects on farms and plantations. At the Huckins’s sanctuary, however, the chemical also seemed to be harming birds.

In response, Rachel hired assistants to help research the Huckins’s claim. Worried by the slow pace of their work, she decided to continue alone. By publishing her findings, she hoped to warn about the dangers of these new chemicals. In order to dramatize the situation, she urged readers to imagine a world without songbirds. The book’s title, *Silent Spring*, describes this possible result of pesticide abuse.

*Silent Spring* prompted readers to raise their voices in unison against the chemical corporations. They demanded an investigation into pesticides and implored the government to restrict their use. In response, President John Kennedy created a Congressional committee to study the matter. Rachel testified before this group and provided facts and information to influence its decisions.

A Strong Reaction

Meanwhile, the chemical companies struggled to counter Rachel’s claims. Despite her reasonable approach to the problem, they tried to depict her accusations as irrational. They published articles and reports that mocked her writing style and belittled her ideas. Advertisements on television proclaimed the safety of their products. When these ads did not change public opinion, they pulled financial support from programs that featured Rachel.

Rachel worried that once pesticides poisoned an area, it might be impossible to restore the environment to its original state. “Man’s attitude toward nature is today critically important simply because we have now acquired a fateful power to alter and destroy nature,” she said in an interview. Her testimony led to restrictions on certain pesticides in the United States. Even so, chemical companies continued to produce them for export to other countries.

Rachel Carson died shortly after *Silent Spring* was published, but her voice survives within her books. Her love of nature endures, along with her quiet desire to preserve and protect the natural world.

Make Connections

What impact did the publication of Silent Spring have on the makers of pesticides such as DDT? ESSENTIAL QUESTION

Think about a time when you wrote or spoke about something that needed to change. What impact did your words have? TEXT TO SELF

**TOEFL Junior:**

acquired (acquire)

approach

awareness (aware)

bureau

continued/ continue (continual)

counter (count)

fateful (fate)

issues (issue)

provided (provide)

restrictions (resistion)

restrict

submitted (submit)

target

**TOEFL:**

acquired (acquire)

alter

approach

assistant (assist)

awareness (aware)

chemical

committee (commit)

abuse

accusations (accusation)

belittled (belittle)

congressional (congress)

critically (critical)

depict

desire

endures (endure)

explore

fascinated(fascinate)

financial(finance)

impact

issues (issue)

marine

mocked (mock)

original

outrage

preserve

proclaimed (proclaim)

prompted (prompted)

raised (raise)

reasonable (reason)

restore

restrictions (restriction)

restrict

revealed (reveal)

spraying (spray)

strengthened (strengthen)

submitted (submit)

testimony

urged(urge)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 5

“To Travel!”

To Travel!

To travel! To travel!

To visit distant places;

To leave my corner of the world

To seek new names and faces.

Adventure! Adventure!

Exploring foreign lands;

If I can leap across the globe,

My universe expands!

A novel waves her arms to me,

“Come read! Come read!” she cries.

Her pages dance with ancient tales,

A feast for hungry eyes!

The paintings on museum walls Are begging me to tour:

“Leave your home and live our scenes,

A grand exchange for sure!”

To travel! To travel!

Through timeless books and art,

I enter and experience

A life so far apart.

Essential Question

What can our connections to the world teach us?

Read two poems about connecting with other cultures and with nature.

I sail across the seven seas,

My heart soars like a bird.

And soon I’m hearing languages

I’ve never, ever heard.

Far across the seven seas,

Aromas fill the air.

Foods I’ve never, ever tried

Are eaten everywhere!

Music blares a different tune,

And strange, new clothes are worn.

Parents pass on customs

To the young ones who are born.

I’ve traveled! I’ve traveled!

It’s left me more aware;

A valuable connection

To the universe we share.

By reading books and viewing art,

I’ve learned a thing or two:

The world was made not just for me,

But made for me and you!

---- Jad Abbas

Wild Blossoms

One bright summer morning, my grandmother asked me to help her plant some flowers. I pedaled my bike downtown, wheels weaving between sunbeams. In the sky, clouds exchanged greetings, their language inaudible, while I, on my errand, brought a long list of seeds to the store. Back on my bikes I followed the same sensible route I always took to Grandmother’s house. I watched with surprise as she tore off the tops of the seed packets and shook them willy-nilly around the backyard, then told me to do the same.

“I thought we were planting a garden,” told her,

“with row after row of flowers.” She said, “Oh, no!

I prefer a mountain meadow, one with plenty

of variety.” As she talked, bees buzzed about

in excitable flight, impatient for blossoms.

Quick swifts and happy sparrows dipped, dove, and darted

after the falling seeds. My grandmother and I

danced about the backyard, arms outstretched, letting seeds

loose on the wind, joyfully dreaming of the wild

beauty that would fill the yard, and us, all summer.

---- Amelia Campos

Make Connections

Describe how the speakers in the poems connect to their worlds. ESSENTIAL QUESTION

How do the connections described in the poems compare with your own experiences? TEXT TO SELF

**TOEFL Junior:**

aware

enter (entry)

essential

expands (expand)

grand

universe(universal)

valuable

**TOEFL:**

aromas(aroma)

customs (custom)

darted (dart)

distant (distance)

exchange

expands(expansive)

grand

impatient (patient/ patience)

universe (universal)

loose

sensible

swifts (swift)

variety(vary/ various)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

**Wonders G6**

Unit 1 Week 1

Cow Music

Farewell to Me

I crammed one last box into the back seat and slammed the car door. It felt as if I were slamming the door on my whole life. At first, I was thrilled when Mom told me she’d gotten a fantastic new job as a veterinarian at an animal hospital. Then, because she always saves the bad news for last, she told me the really heinous part. The hospital wasn’t in our city; it was miles away in the middle of nowhere. And I’m definitely *not* a country girl.

I slouched against the car, taking a last look at our building. To most people, it probably just looks like any other old apartment house, but I love every grimy brick. Soon I’d be staring at piles of hay.

Just then, I heard a bright blast of music and saw my best friends, Hana and Leo, come charging up to me. While Hana played a cool riff on her trumpet, Leo sang, “We will miss you, Celia... At least you won’t be in Australia.” I raised my eyebrows.

Laughing, Leo said, “Hey, *you* find something to rhyme with *Celia*!”

“You guys are utterly indispensable!” I blurted out. “How will I live without you?”

“Ever hear of texting?” asked Hana, punctuating her question with a loud trumpet honk. I jumped into the car fast so no one could see me tear up. As Mom pulled away, I waved goodbye to my friends, my neighborhood, and my life.

We rode a while in silence, and I wedged my violin case beneath my legs for comfort. Leo, Hana, and I had been writing songs for our band, but that was all over now. “Don’t think of this as an ending,” Mom said, with her knack for reading my mind. “It’s an exciting beginning, and we’re on the threshold of a breathtaking new adventure.”

“Yeah, it’ll be great. I couldn’t be happier,” said glumly.

“Don’t be sarcastic, *mija*,” Mom said. “It’s so unattractive.”

Being attractive wasn’t a big goal at the moment, but annoying Mom wasn’t either. So I clammed up and looked out the window as crowded, exciting city streets turned first into bland suburban shopping strips and then into endless, boring trees and fields of corn.

“Look: cows!” Mom said, as we cruised past some black-and-white blotches in a pasture.

“Sure, they seem sweet,” I said, “but I bet they have a mean streak when you’re not looking.

“It’s normal to be a bit phobic about unfamiliar things,” Mom said, in her best patient-parent tone. “But you don’t need to be afraid of cows. They’re harmless.”

“Harmless ... and boring,” I thought to myself. “Like everything in the country.”

Not So Bad?

We finally arrived at our new home, a two-story wooden farmhouse. It had a crooked roof, a rickety front porch, and too many places for bats to hide. “Would you mind if I don’t go in yet?” I asked.

Mom looked overwhelmed. She just nodded and said I could go explore. I felt a glimmer of hope, a small hint that country life might turn out okay. Mom never let me go out alone in the city, so maybe a bit more freedom would be one consolation of living here.

I wandered off, clutching my violin and not paying attention to where I was going. It didn’t matter; it was all just a blur of green and brown. I imagined that a big Saturday night here meant sitting around talking about corn ... or watching it grow.

Suddenly I heard something I wasn’t expecting ---- a blaring, jazzy tune. I pushed through some com only to come face-to-face with an enormous cow. Then another hot jazz riff floated through the air. I spun around and saw a tall kid playing a beat-up old saxophone in the clearing. His music was fantastic, and he didn’t dress the way I figured a country kid would. Where were the muddy dungarees and plaid bandana? This guy was wearing clothes that made him look cool, like a famous performer.

Not Bad at All!

I couldn’t resist, so I took out my violin and began to play along. The boy looked surprised, but he didn’t miss a beat. We improvised a cool duet, and by the end ---- no kidding ---- the big cow’s tail was swishing to the rhythm. “I’m Jason,” he said when we finished. play out here because the cows don't complain when I mess up. You must be Celia. My dad said you were moving in. I can’t believe you play violin! I’ve been looking for someone to write songs with.”

I looked at Jason and his dented sax, the cheerful cow and tall com, the majestic trees in the distance, and the sun shining in the brilliant blue sky. I could feel my perception of country life already changing, and I had a feeling it would change a lot more.

Make Connections

Talk about how Celia’s first experience in her new home gives her a new perspective. ESSENTIAL QUESTION

Describe a time when trying something new or unfamiliar changed your perspective. TEXT TO SELF

**TOEFL Junior:**

blast

complain (complaint)

hint

resist

**TOEFL:**

annoying(annoy)

bland

blast

boring

clutching (clutch)

complain (complaint)

consolation

crammed (cram)

crooked

definitely (definite)

indispensable (dispensable)

enormous

explore

unfamiliar(familiarize)

improvised (improvise)

perspective

resist

strips (strip)

threshold

suburban(urban)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 2

Drumbeat of Freedom

On a cold December evening in 1777, the deep blue curtain of night had begun to drop over the snow-covered hills and fields of Valley Forge, Pennsylvania. As always at this time, Sarah Bock lit a lantern and walked to the bam to check on the animals. Though she had only just turned twelve, she shouldered many responsibilities on her family’s farm.

As she crossed the yard, Sarah could see smoke rising above the encampment barely a mile away. She had often wondered about General George Washington and his Continental Army wintering there. The soldiers faced great adversity during this bitterly cold winter. They were poorly clothed, and many were hungry or ill.

Sarah hurried toward the barn to seek refuge from the wind that bit at her cheeks. She took a shortcut through a stand of spindly trees. Their thin branches could barely support the weight of the snow. Suddenly, she saw something that made her heart leap to her throat. A trail of footprints led from the trees to the barn. Some were smudged with blood.

When Sarah reached the bam, she took a few wary steps inside. All at once, the lantern’s glow caught a shadowy figure huddled in the comer. Sarah held her breath and slowly stepped backward, her heart pounding. Just as she made it back to the bam door, she heard a young man’s voice.

“Don’t be afraid,” the man said, limping barefoot out of the shadows. “I will do you no harm.”

“Who are you?” Sarah asked. There was fear in her voice, but the sight of this poor soldier, half starved and hurt, had already lessened her alarm.

“My name is Charles Kent,” he said. “I’m stationed with General Washington. The men are starving. Might you spare a little food?”

In recent weeks, word had spread that some of the soldiers had taken to begging. Not all of the farm families were sympathetic to their cause, however. Sarah’s own father had told her he wasn’t sure the soldiers could succeed in this conflict with the British. He didn’t want anyone in his family to become involved in the war.

Sarah had a difficult decision to make. Should she obey her father, or should she help the soldiers? A moment later, Sarah spoke in a quiet voice. “I can see how hungry you are. Stay here. I’ll try to smuggle out some of the salt beef we keep in our cellar for hard times.” Sarah ran back to the house, and a short time later she returned to the bam with the food hidden under her cloak.

After that first night, Charles came back to the bam many times. Sarah would bring him beef or bread when she went out to do her evening chores.

One evening, Sarah had time to sit with Charles while he ate. He began to reminisce about his family back home. He spoke about life in the army and why he felt this fight for freedom was a worthy one.

Suddenly, they heard a creak. It was the bam door. Sarah jumped to her feet as her 18-year-old brother John walked in. She saw surprise and then anger cross his face. Before he could say a word, Sarah swiftly introduced her new friend.

“But Sarah, you know Father doesn’t want us involved in this war,” John scolded. Then, a bit uncertainly, he added, “This fight is none of our business.”

“I know that’s how Father feels,” she answered. “But I believe the war is important. These men are fighting for us, for our freedom. We can’t just stand by while they suffer from hunger and disease. How is it fair that soldiers fighting for such a just cause should have these harsh conditions inflicted on them?”

Sarah’s brave words erased the anger from her brother’s face. John hesitated a moment and then sat down with Sarah and Charles. He listened eagerly to the soldier’s tales of battles against the British. Later that night, John brought Charles a pair of old shoes to wear.

Soon, the harsh winter melted away into spring, and Sarah noticed that the army encampment seemed increasingly busy with activity. The troops, who had been held prisoners by the cold, were breaking free from the confinement of their winter quarters. Were they getting ready to fight the British again?

Sarah knew John was sneaking away to speak with the soldiers, and she was sure he had formed an alliance with Charles and the others. Now, when Sarah and John knew their parents couldn’t hear, they even spoke about their growing loyalty to the cause of independence.

One sunny morning in June, Sarah awoke to the steady thump of drumbeats echoing through the sleepy valley like a heartbeat. She dressed quickly and ran outside to join her parents. Just beyond the farm, General Washington's troops were marching out of Valley Forge. Though their uniforms were tattered, they all stood as straight as arrows. They had retrieved the resolve that had been tested during the long, difficult winter.

Sarah suddenly realized that her brother was missing. “Where is John?” she asked. Without answering, her mother stifled a sob and wiped tears from her eyes. A feeling of worry rose in Sarah’s heart, but it was mixed with pride.

Just then, more soldiers strode by. In their ranks were John and Charles. When John waved, Sarah could see in his eyes that he was a true supporter of the cause. Now Sarah stood straight and tall. She waved to her brother as he marched away to the drumbeat of freedom.

Make Connections

Talk about the alliance that changes Sarah’s understanding of the events unfolding near her home. ESSENTIAL QUESTION

Compare the alliance that Sarah forms to one you have formed in your own life. TEXT TO SELF

**TOEFL Junior:**

during (duration)

hesitated (hesitate)

resolve

starved (starvation)

valley

**TOEFL:**

adversity

alliance

backward

barely (bare)

chores (chore)

confinement (confine)

continental (continent)

eagerly (eager)

erased (erase)

harsh

hesitated(hesitate)

inflicted (inflict)

limping (limp)

quarters (quarter)

ranks (rank)

refuge

resolve

retrieved (retrieve)

sneaking (sneak)

starved (starve)

steady

swiftly (swift)

sympathetic

thump

wary

worthy

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 3

The Secret World of Caves

In the Mouth of the Cave

Stepping into a cave is like entering an entirely new world. The environment is suddenly cooler and damper. Though there is some light here, it is dimmer than the light outside. There is a sense of stillness and quiet. This outermost area is called the *entrance zone*. It is a hallway leading to the many secrets of life in a cave.

An animal that uses the entrance zone of a cave belongs to the classification known as *trogloxenes*. Creatures in this category may seek shelter in caves but don’t spend their whole life cycles in them. They also spend time on the surface. Some entrance zone organisms are called *accidentals* because they often find their way in accidentally. These cave guests stay for a while but not for long.

Bats are among the most common trogloxenes. Hanging upside down from a cave’s ceiling, they are protected and sleep undisturbed. Bats also hibernate this way during the coldest months. In warm months, bats search for food outside the cave.

Other species make use of the entrance zone for protection, too. Pack rats build nests using twigs and leaves from the outside. Their big eyes and long whiskers help in maneuvering through the dim light. Small gray birds called phoebes seek safety inside cave doorways. They make their nests in a compartment, or nook, in the cave walls. These small spaces hide the birds from animals that prey on them.

Twilight Time

Deeper inside a cave, the walls and ceiling obscure most of the light from outside. This shadowy area is known as the *twilight zone*. The light in this zone is so dim that everything appears to be bathed in a bluish glow. This part of a cave feels even damper and cooler than the entrance zone.

Animals that rely on the environment of the twilight zone are called *troglophiles*. Their eyesight is often poor, and they usually have less colorful bodies than animals living outside of caves. These creatures spend their entire life cycles inside moist caves, but many can also survive in similar habitats outside of caves. Animals commonly found living in the twilight zones of caves are centipedes, fish, beetles, earthworms, and spiders.

Some twilight zone animals live submerged under water. This spring cavefish lives on microscopic organisms.

Totally in the Dark

Deeper still inside a cave, beyond the twilight zone, is the dark zone. Here passageways are flanked on either side by steep stone walls. There is no light at all. Darkness engulfs this place, and moist air envelops everything.

It is hard to believe that any animals could live their whole lives in total darkness. Yet many strange creatures live in the dark zones of caves. These animals, known as *troglobites*, include rare species of frogs, salamanders, spiders, worms, insects, and crabs. Cave biologists believe (hat these unusual creatures are distantly related to animals that once lived near caves. But they look only slightly similar to their surface relatives. Troglobites even need food that is unavailable outside of caves.

This salamander is sightless.

Troglobites are adapted to living with the absence of light. Most of them are completely sightless. So it is only logical that these unusual cave dwellers have heightened senses of smell and touch. For example, their bodies can detect the slightest vibrations. They can also sense changes in the air pressure around them. When something is moving nearby, these creatures can feel it. This special ability helps them catch food. It also helps them avoid becoming another animal’s meal.

Most troglobites have ghostly white skin. Some even have skin you can see through. They don’t need pigment in their skin to protect them from the sun’s rays. And they don’t need skin coloring to help them blend in with their surroundings for safety. These unusual adaptations mean that troglobites can never leave the dark zones of caves.

Scientists now know that cave animals are vulnerable to even minor changes in their environment. So their work includes protecting these least known and fascinating creatures.

Make Connections

Talk about how different life forms are well suited to living in each of the three cave zones. ESSENTIAL QUESTION

What other animals have you seen or learned about that live in unusual habitats? TEXT TO SELF

**TOEFL Junior:**

adapted/ adaptations (adapt)

unavailable (available)

avoid

completely (complete)

undisturbed (disturb)

during (duration)

entering (entry)

heightened (height)

moist

obscure

submerged (submerge)

vibrations (vibrate)

**TOEFL:**

adapted (adapt)

unavailable (available)

category

accidentally (accident)

avoid

blend

damper

detect

distantly (distant)

dwellers (dwell)

engulfs (engulf)

envelops (envelop)

twigs (twig)

logical (logic)

moist

obscure

organisms (organism)

pressure

slightly/ slightest (slight)

stillness (still)

submerged (submerge)

survive

vibrations (vibrate)

vulnerable

zone

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 4

The Monster in the Mountain

Meet Marta Ramírez

As a young girl during World War II, Marta Ramírez saw newsreels that showed B-25 airplanes flying near the smoky plume of a volcanic eruption. The year was 1944, and Mount Vesuvius in Italy was erupting! Blankets of burning ash were seen smothering the airplanes. Shards of volcanic rock came plummeting from the sky. Soldiers on the ground ran for cover. Each glowing splinter of rock was like a deadly bullet.

Those images never left Marta. She has been fascinated by volcanoes ever since. When she got older, Marta earned degrees in geology and volcanology. Though she has studied many of the world's volcanoes, she returns again and again to Mount Vesuvius. Marta has climbed down into its smoking crater many times. In the following memoir, she describes one of her visits and why this volcano still inspires her work.

At the Monster’s Mouth

I recently went to see this dynamic volcano again. I decided to climb its slope along with the dozens of curious tourists visiting that day. As we walked, our shoes crunched on cinders that had been dropped there long ago. Finally reaching the rim, we gazed at the spectacular view. We stared 800 feet down into the crater. It was quiet for now, but I knew it was only sleeping. Frequent tremors and small earthquakes prove that this monster is not dead. Did the others standing there with me know about the danger beneath their feet?

Every time I see this volcano up close, I think about how it had roared like a lion back in 1944. The trembling earth shook buildings for miles around, and streams of scalding lava flowed down the sides. Like glowing red fingers, they stretched out to crush defenseless homes below. It must have been terrifying to witness in person. Today, the lava that once cascaded down the mountain is hard and dry. It looks a bit like the skin of an elephant.

When the Monster Awakens

There is a lot of documentation of Vesuvius's past. Geologists have gathered this evidence of earlier eruptions by studying the rocks that were formed. Before 1944, the most catastrophic eruption occurred in 79 A.D. A Roman writer named Pliny the Younger described it in detail in his letters. On the morning of that tragic day, no one guessed that an enormous volcanic explosion was about to pulverize tons of rock and send it raining down on the city. People couldn't know that thick, dark ash and fiery lava would completely destroy the nearby cities of Pompeii and Herculaneum. By evening, few people had survived.

Many smaller eruptions have occurred since then, including the one in 1944. Volcanologists believe that another major eruption could occur at any time. The probability grows with each passing year. To watch for geological changes within Vesuvius, we have set up seismographs on the slopes of its cone. These instruments measure the slightest shifts in the rock beneath the mountain.

During one dangerous but exciting mission, I climbed down into the crater itself. My crew and I worked on mapping what was going on underground. We also measured the gases leaking from small vents. Any sudden increase in carbon dioxide and other gases might signal an eruption.

Looking Ahead

I don’t go into the crater anymore, but I often think about how Vesuvius threatens the environment around it. Today, the city of Naples lies at the foot of Mount Vesuvius. If an eruption occurred tomorrow, the city would not be ready. Tons of ash and rock would once more be hurled into the air. This volcanic debris would keep cars, planes, and trains from operating. People would try escaping on foot. Sadly, no one can outrun such an eruption.

The only sure way to protect people who live near this volcano is to give them enough warning. The city of Naples has detailed evacuation plans. For the plans to work, however, officials need to be warned seven days before an eruption occurs. I hope the work that volcanologists do will help to give people the warning they need. Until then, I’ll be watching this sleeping monster, just in case it starts to wake up.

Make Connections

Talk about how Earth’s natural forces affect the environment around Mount Vesuvius. ESSENTIAL QUESTION

What natural occurrences have you experienced that could pose a danger to people? TEXT TO SELF

**TOEFL Junior:**

ash

collision

completely (complete)

during (duration)

explodes (explode)

explosion

gazed (gaze)

geologists/ geological (geology)

leaking (leak)

witness

**TOEFL:**

burning (burn)

carbon

cone

crew

crush

crust

deadly

defenseless

enormous

eruption (erupt)

exerts (exert)

explodes(explode)

explosions(explosion)

witness(eyewitness)

fascinated(fascinate)

gazed (gaze)

hurled(hurl)

instruments (instrument)

tremors (tremor)

leaking (leak)

monster

operating (operate)

slightest (slight)

slope

smothering (smother)

spectacular

terrifying(terrify)

volcanoes (volcano)

witness

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 1 Week 5

Making Money: A story of Change

MAKING

A STORY OF CHANGE

What do cows, sacks of grain, seashells, strings of beads, and swaths of deerskin have in common? They have all been used as money. Currency in the form of coins and bills is a fairly recent development. And before there was any currency at all, there was barter.

Let’s Make a Deal

Barter is basically a cashless system for exchanging goods or services. People likely bartered from the earliest days of human society. Maybe someone was good at making tools but needed help hunting for food. Another person was a good hunter but needed an axe to build a shelter. When they bartered, the toolmaker got help hunting, and the hunter got a new axe. Today, the give-and-take of bartering with a neighbor can be a useful formula for exchanges of goods and services, but most of us use money to buy what we need.

How Many Cows Does That Cost?

About 9000 B.C., humans developed agriculture and started living in communities. They grew crops and raised animals for food. So the first form of currency was probably livestock. People could pay for goods and services with cattle, sheep, goats, pigs, or camels. Grain and other crops served as money, too. As societies developed, however, ships and caravans made a growing inventory of goods available for trade over great distances. Suddenly, big live cows and huge sacks of grain were no longer practical to use as currency. People needed money that would not die or spoil after a short time.

Shopping with Shells

About 1200 B.C., the Chinese began using cowrie shells as money. Cowries are animals that live along many coastlines, so people in Africa and India used this more convenient form of currency, too. On the other side of the world, Native Americans made money by stringing beads carved from clamshells. They called their currency *wampum*.

Metal Money

The Chinese were the first to use metal for making currency. At first, they cast bronze or copper into shapes that resembled cowrie shells or small tools. These manufactured “coins” later became flat and, eventually, round. Before long, the use of round metal coins was adopted in other I parts of the world, including Asia Minor, Greece, and Rome. Many early coins were stamped with Images of animals, deities, or kings.

A number of factors gave metal coins an advantage over earlier forms of currency. They lasted a long time, were easily recognized and counted,

and had values based on the metals from which they were made. The rarest metals, such as silver and gold, had the highest values.

The Chinese developed yet another form of money about 100 B.C. It was flat, like todays paper money, but each was actually made of deerskin. In the seventh century A.D., the Chinese even started printing the very first paper money. Its popularity in China didn't last, but the idea really caught on in Europe by the eighteenth century.

Money Now

The key idea about money today is that it is issued by governments. In the U.S., your one-dollar bill is worth the same as anyone else’s. The same is true for the South African rand, the Chinese *yuan*, the Brazilian *real*, and the *euro* of the European Union. However, the value of one nation’s currency in relation to others can fluctuate daily.

Today’s money is far more versatile than ancient varieties. In addition to exchanging actual coins and bills, we can write checks that represent the money we have in the bank. We also use the least physical form of money: electronic, or computer-based, currency. When employers deposit salaries directly into their workers’ bank accounts, or when we charge an online purchase to a debit or credit card, the exchange is made entirely in the digital realm.

TIME FOR KIDS

Barter or Bucks?

Sorter Is Better by Jonah M.

I’ve learned how to get things I need without spending a dime! Officially, it’s called “bartering”, but it’s as simple as trading what I don’t need anymore for something I want. Last week I traded my in-line skates for my friend Robert's guitar. It’s a lot like recycling: things you were going to throw away will be used by somebody else. Another way to barter is to trade your time and some work for something you want.

The Case for Cash by Haylee D.

Cash lets me choose exactly what I want to buy. I can also compare prices of similar items at different stores. I don’t always spend my money right away. My mom helped me open a savings account when I was 7 years old. Whenever I receive some cash, I go straight to the bank to deposit at least half of it. Over time, the money I save, and any interest it earns, will help me buy things I wouldn’t be able to afford otherwise.

Make Connections

Talk about how people’s changing needs caused them to develop various currencies. ESSENTIAL QUESTION

What are some of the different forms of currency you have used to pay for goods and services? TEXT TO SELF

**TOEFL Junior:**

adopted (adopt )

available

compare (comparable)

counted (count)

deposit

highest (height)

issued (issue)

number

simple(simplicity)

value/values(value)

**TOEFL:**

available

adopted (adopt )

afford

barter

compare (comparable)

convenient (convenience/ inconvenient)

copper

credit

currency

deposit

employers (employer)

exchanges (exchange)

fluctuate

inventory

issued (issue)

manufactured (manufacture)

practical (practice)

purchase

realm

recognized (recognize)

resembled (resemble)

spoil

varieties(vary/ various)

versatile

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 1

Empire of the Sea

Between the Mountains and the Sea

Around 1500 B.C., a remarkable civilization began to develop. Squeezed between tree-covered mountains to the east and the Mediterranean Sea to the west, tiny Phoenicia would flourish for more than 1,000 years. During that millennium, the Phoenicians would explore far beyond their homeland and establish a trading empire. It was their clev

er solutions to key problems that enabled them to thrive.

Resource Rich

*Imagine what it was like to live in Phoenicia. Although your country is not big in size, it is rich in resources. Cedar trees cover the hills. Farmers grow many crops, including large yields of grapes, olives, and wheat. There are more than enough resources for your own people. How will you profit from what you don’t use?*

To benefit from their resources, the Phoenicians began producing various goods. For example, they cut cedar trees to use as timber for building. They used the shells from a type of snail called the murex to make a highly prized purple dye. And as more than one ancient artifact shows, they also made beautiful objects of glass. The Phoenicians believed they could find buyers for all of these goods.

From Cedar Trees to Cargo Ships

*Because of Phoenicia’s location, your neighbors include Greeks, Egyptians, Hebrews, and other groups. These people are all possible trading partners. The most practical way of reaching them is to cross the Mediterranean. But your merchants have access only to small boats, which cannot hold much cargo. How will you transport your goods to the people who want them?*

Modern shipbuilders reproduce the designs of Phoenician ships.

Archaeologists have been able to utilize written records from other civilizations to learn about the Phoenicians. From those records, they have derived evidence that the Phoenicians constructed enormous cargo ships from cedar wood. They used a method called “keeling the hull.” The keel was a large wooden beam forming the central spine of the ship. The ship’s curved hull, or frame, was built around the keel. This technique kept the ship strong and stable in the water. As a result, Phoenician ships could safely carry large, heavy loads.

The Phoenicians also became skilled navigators. In earlier times, traders had sailed only during the daytime. They stayed dose to the coast for fear of losing their way. But the Phoenicians learned how to find their way using the stars. They could chart a course and steer their ships by locating the North Star, which soon became known as the “Phoenician star.”

Trade Routes and Trading Posts

*Your work as a Phoenician merchant includes exporting timber, dyed fabrics, glassware, and some foods. You also want to import copper, tin, silk, spices, horses, and papyrus for making stationery to write on. How will you create a system of trade routes for buying and selling these goods?*

At first, there were few set trade routes for the Phoenicians to follow. So they developed their own. They traveled west and south around Africa and north to Europe. Phoenician routes helped other people trade, too. As Phoenician merchants sailed from place to place, they exchanged goods, ideas, and customs among people in many cultures. Their routine ports even developed into cities. Carthage in northern Africa provided a safe harbor for Phoenician merchants over many years.

From Aleph to Zayin

With trade going well, you need to keep accurate records of sales. But writing systems were complicated. Egyptian writing involved making an inscription, or carving, of symbols called hieroglyphs. Mesopotamian writing, called cuneiform, grouped wedge-like shapes to represent ideas and numbers. What simpler, communal system of writing could you use to help everyone understand your records?

The Phoenicians found a solution: an alphabet. This new system of writing used combinations of the same letters to represent different sounds. Beginning with the letter *aleph*, their alphabet included 22 consonants. Because of its simplicity, it was soon widely adopted in many places. It also became the basis for alphabets used in many modern languages, including ours.

By 300 B.C., the Phoenician trading civilization had fallen into decline. But the Phoenicians’ alphabet, navigational methods, and shipbuilding designs lived on. Thousands of years later, the contributions of ancient Phoenicia continue to enrich our world.

Make Connections

Talk about the important contributions of the Phoenicians. ESSENTIAL QUESTION

Describe how one Phoenician innovation affects your everyday life. TEXT TO SELF

**TOEFL Junior:**

adopted (adopt)

cargo

continue (continual)

decline

derived (derive)

during (duration)

enrich

highly (height)

merchant

navigational(navigation)

number

provided (provide)

remarkable

simpler/simplicity(simplicity)

timber

treaties(treaty)

**TOEFL:**

access

accurate

benefit

chart

civilization (civil)

adopted (adopt )

combinations (combination)

complicated (complicate)

constructed (construct)

copper

customs (custom)

decline

dye

enabled (enable)

enormous

enrich

exchanged (exchange)

explore

innovation

navigational (navigation)

remarkable

reproduce

routine

spine

squeezed (squeeze)

stable

stationery

symbols (symbol)

thrive

timber

utilize

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 2

The Democracy Debate

Born and Raised in Greece

Have you ever heard the phrase “government by the people?” That is the meaning of the word *democracy*. The United States is a democratic republic, as are many countries around the world. But where did democracy come from? Some of the earliest ideas about democracy arose in the city of Athens in ancient Greece. But how should democracy be put into practice? The answer to that question has been strongly debated for centuries.

Even when democracy was a new idea, people argued about how it should work. How should power be shared? Should all people be allowed to vote and make important decisions? Among the first people to think about these key issues were the ancient Greek philosophers.

Great Minds

The word *philosopher* means “lover of wisdom,” a person who seeks knowledge and is able to make good and fair decisions. One of the best-known Greek philosophers, Socrates, lived nearly 2,500 years ago. He valued wisdom highly, and he thought deeply about democracy. Socrates was one of the principal critics of government run by the people. He felt that only fair and wise individuals should be allowed to decide things.

The ideas that Socrates had about democracy were considered dangerous to the existing democracy in Athens. The current Athenian leaders did not want some other “fair and wise” people aspiring to run their city. Socrates was a famous teacher. And speculation among the city’s leaders included worries that he would encourage young students to pick up his radical ideas. So they chose to execute him.

Students of Philosophy

The philosopher Plato had studied with Socrates. He also thought seriously about democracy. In 380 B.C., Plato shared his ideas about government in his book *The Republic*, He agreed with Socrates that rule by the people would bring about poor decisions and a weak government. But, unlike his teacher, he believed that three different groups of people could share the responsibility of governing. The “highest” group would be philosopher-kings guided only by what is best for the state. The second group would be soldiers who protected the state. The last group would be common people who provided goods and services.

Around 388 B.C., Plato formed a school called the Academy. A star pupil there was the philosopher Aristotle, who believed in balance and moderation. About 350 B.C., Aristotle wrote in his book *Politics* that a government that tries to restrict power to a few educated men would not work. It would benefit only the rich. A democracy run by common people would not work either, because such people might not make wise decisions.

Changes in Rome

About 400 years after Aristotle, the influence of Greek thinking was still felt by philosophers in Rome. Cicero is the best known Roman philosopher. Like Aristotle, he believed a balance of power brought peace and prosperity. That was because different types of people took part in government.

Cicero believed that the Roman republic was the best model for government because it was mixed. It combined features of a monarchy, an aristocracy, and a democracy. Cicero saw that the Roman republic was breaking down, mostly because the aristocracy had gained too much power. In his book, *On the Republic*, he urged a return to a more balanced government.

|  |  |  |  |
| --- | --- | --- | --- |
| Philosopher | Place | Time Period | Ideas About Democracy |
| Socrates | Greece | 469-399 B.C. | Only wise and just people should govern. |
| Plato | Greece | 427-347 B.C. | Rule should be shared by philosopher-kings, soldiers, and provides of goods. |
| Aristotle | Greece | 384-322 B.C. | Educated and common people should each have a role in government. |
| Cicero | Rome | 106-43 B.C. | The Roman republic ---- a monarch, an aristocracy, and the people ---- is best. |

The Debate Continues

The founders of the United States also thought about how a democracy should be organized. They studied governments that had preceded ours and believed that the foundation of any new government should revisit Greek and Roman ideas. For example, Thomas Paine wrote booklets to promote the idea that people should govern themselves. James Madison admired Aristotle’s and Cicero’s beliefs in balancing power among different groups.

In 1787, Madison helped Alexander Hamilton write a set of essays called *The Federalist* to encourage states to ratify the Constitution. They made the case for having a *pair* of law-making groups. The smaller Senate would be similar to Rome’s senate, while the House of Representatives would give more people a voice. They also endorsed having one president and a system of courts to interpret the laws.

Today, people are still debating what the meaning of *democracy* is and how our government should be organized. The U.S. Constitution has been amended more than 25 times to reflect changing ideas. Yet it is important to remember that our government has roots in ideas from ancient times. Democracy has withstood the test of time.

Make Connections

Talk about how the philosophers’ ideas influenced our democracy. ESSENTIAL QUESTION

How does your understanding of democracy compare to the ideas the philosophers had? TEXT TO SELF

**TOEFL Junior:**

continues (continual)

debated (debate)

highly/ highest (height)

individuals (individual)

interpret

issues (issue)

knowledge

provided (provide)

restrict

valued(value)

vote

withstood(withstand)

principal

**TOEFL:**

academy

amended (amend)

admired (admire)

aristocracy(aristocrat)

balance

constitution

courts (court)

current

debated (debate)

democracy

endorsed (endorse)

issues (issue)

monarchy (monarch)

preceded (precede)

principal

promote

prosperity

radical

ratify

restrict

role

speculation

urged(urge)

vote

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 3

Yaskul’s Mighty Trade

*Located in what is now Afghanistan, the ancient city of Bactra in the Kushan Empire was a key market for merchants traveling the Silk Road trade route. In AD 110, lively commerce attracted merchants from east and west to the famous market in Bactra. In the following, Yaskul, the 12-year-old son of a Bactrian merchant, is eager to make his first official trade.*

I Make Plans

It is early, but I am awake. Though we are only in the month of *Hyperberetaios*, it is a cold autumn day. As I quickly dress, I think about how the Chinese caravan arrived last night. If winter comes early, we may not see another caravan for months, as snow will close the passes. My family must have success at the market tomorrow.

*Tomorrow I become a trader*, I think. Father says I will be there only to watch and learn, but Grandfather says that Father is too cautious. He says Father makes timid trades and does not obtain the best prices, especially for lapis lazuli.

Lapis lazuli! How I love the brilliant blue stone that comes from the mines up north. Grandfather says that even the Egyptians prized this stone. He has awarded me some beads of my own and is instructing me on how to price them. “You listen, and you learn from me. Always watch the eyes of the man you bargain with. The eyes say when he is willing to pay more and when he will walk away.”

Thieves!

When Grandfather and I reach our storage room today, Father is already there. “Thieves!” he cries. “They took everything!” Grandfather surveys the room and says it is not everything. I too spot yarn and metal cups tossed on the floor.

Father points to a small alcove, a shelf we have carved in the wall. “The thieves missed our wool rugs and sacks of salt. But all our lazuli stones are gone!” I comprehend how little is left for the market tomorrow. What remains are domestic items, and common home goods will not fetch many *drachm* coins. The merchants from China will likely dismiss our wares. Quickly, I remind Father that I still have my lazuli beads.

Grandfather peers at me, thinking. “Yes,” he says, nodding. “Your stones are now of the utmost importance, our only hope for a successful trade. You must convince the Chinese that your stones are of the highest quality, or we will not get the best price.”

I swallow hard. Grandfather smiles and puts his hand on my shoulder. “Don’t fret, Yaskul. You possess the skill to make this trade a mighty one.”

I Make a Friend

In the evenings I slip away to observe the Chinese traders before we meet them at market. I feel my eyes widen when the traders draw dose to their fire’s light. Their exotic robes truly glow with color. They are so much finer than my clothes.

Suddenly, one man of perhaps 19 years walks toward me. I jump back, but he smiles and waves at me. “Do not be frightened.” His voice is friendly. “Is Bactra your home?” I am amazed that he is so fluent in my language. This young man has traveled much already, I think. “Are you a trader?” he asks me.

“I am Yaskul,” I say. “My family are traders.” He introduces himself as Zhang. “I have heard that name,” I answer. “Did not a great man named Zhang come to Bactra long ago?”

Zhang nods. “Zhang Qian was sent to find allies for us. But he found instead your marvelous marketplace.

He called your people ‘shrewd traders.’”. We smile. I tell him of the upheaval caused today by the theft of our goods. “Your luck was hard. Even so, you will trade well,” Zhang says. I hope he is right.

Market Day

I have strung my beads as a necklace, which shows the stones well. Father has guarded our remaining merchandise all night. With Grandfather, we transport it to the marketplace. Today’s bright sun will make the stalls grow hot and stifling.

I am amazed by all the goods for sale: tea, almonds, elegant ceramics, carved ivory and jade, and the finest Chinese silk. We reach our stall as the Chinese traders arrive. Zhang nods to me as Father begins bartering with the oldest Chinese merchant, but this elder does not seem impressed by our offerings.

Then Zhang speaks. “Do you have any of the vivid blue stones your people are known for?” Grandfather gently pushes me forward. Nervously, I hold out my necklace. I notice the oldest merchant’s eyes light up, and I hear myself tell him how particularly Make Connections fine these beads are. The trading grows lively, and before I realize it, we agree on a high price. I hand him the necklace, and Father collects a handful of *drachms*.

Zhang winks at me, but says not a word. After the Chinese traders depart, Grandfather embraces me, and even Father thumps me on the back. Now I can truly call myself a trader!

Make Connections

Talk about the importance of trade in the lives of people living in the ancient city of Bactra. ESSENTIAL QUESTION

Describe a time when you overcame nervousness to succeed at something important to you. TEXT TO SELF

**TOEFL Junior:**

awarded (award)

bargain

cautious (caution)

domestic

highest/ high (height)

marvelous

merchant

slip

spot

swallow

**TOEFL:**

amazed (amaze)

bartering (barter)

cautious

comprehend

depart

domestic

elegant

embraces (embrace)

exotic

fluent

fret

frightened (fright)

instructing (instruct)

marvelous

merchandise

mighty

mines (mine)

nervously/ nervousness (nervous)

nods/ nodding (nod)

obtain

remind

shrewd

spot

stalls (stall)

surveys (survey)

theft

thumps

timid

vivid

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 4

Cusi’s Secret

*Beautiful textiles had great value to the Inca, whose empire arose in what is now Peru. The year is 1430, and 11-year-old Cusi is an Incan girl with a special talent for weaving. Although few girls were allowed to receive an education in Inca society, Cusi dreams of going to school.*

A Family Tradition

As they did most mornings, Cusi and her mother were working at their handheld looms. A curious girl, Cusi asked, “Tell me again, Mama: How is it that our family became such fine weavers?”

“When I was a girl, your grandmother taught me to shear wool from the alpaca in our herds and then to weave with it,” Cusi’s mother patiently responded. “It was *her* mother ---- your great grandmother ---- who had passed our family’s legacy on to her.”

When the sun grew warm, Cusi took her loom to the shadows beneath the eaves of their house. Alone now, she gazed over at the girls’ schoolhouse gleaming on a nearby hill. “How I wish I could go there,” she said longingly. “I do not understand why there are schools for all the boys but so few girls have a chance to learn. It is not fair!”

A Special Invitation

As Cusi was voicing her thoughts, she spied one of the school’s *mamaconas*, or teachers, walking along a nearby path. Cusi fell silent as the woman stopped to watch her weave. Pretending not to see the teacher, she did her very best to show off her skills.

Cusi began working a vibrant pattern into the perimeter of the cloth. Her hands deftly glided over the woolen strands, darting as quickly as a hummingbird flies. The teacher watched in amazement, impressed by the loveliness and symmetry of Cusi’s design.

Then Cusi’s concentration was broken by a knocking sound. She looked up to see her parents greeting Mamacona at the door. Humbly, the teacher said to them, “I watched your daughter working at her loom. She is young to have such expertise. you allow her to become one of my students?”

Hearing this, Cusi wanted to rush forward and shout for joy, but she knew Incan girls should not display such impudence. So she remained still. After what seemed like hours, Cusi’s father spoke. “We will miss her, but yes, we would be honored to have Cusi attend school. An education will be of great benefit to her.”

That night, Cusi’s parents made the arrangements for her to begin school. She would leave them in just one week. Cusi felt such optimism, but she was nervous, too.

Much to Learn

Cusi found living at the school so different from being at home. She had to memorize the essentials of Incan history and beliefs, and she also learned to prepare foods, including *chicha morada*, a special drink made from purple corn.

But the highlight of Cusi’s new life was weaving class. She relished learning to spin yam from the precious wool of *vicuñas*. Cusi had glimpsed the tiny camels roaming distant hills, and once on market day she had even secretly stroked a garment made from their silky wool. She knew only royal people could wear such robes. “It is a privilege just to touch fibers as fine as these,” she sighed contentedly.

One afternoon, while the other girls were practicing techniques she had already mastered, Cusi began to daydream. Her thoughts drifted back to a day when she had seen a village elder using a *quipu* to count and record the number of alpacas in the herds. The counting tool, made by knotting strands of wool, had fascinated her.

“Excuse me, sir,” she had said to the man. “Will you please show me how to use the counting threads?”

With a sneer of derision, the man had shouted angrily at Cusi. “Foolish girl! Has no one told you only men may use the *quipu*? Never speak such nonsense again!”

Cusi had run away as fast as her legs would take her, yet she never forgot about the *quipu*. Even now, as she recalled that long ago scene, her fingers worked at tying knots in a wool cord. She was convinced the secrets of this forbidden tool were the key to great knowledge.

Suddenly, a classmate’s shout startled Cusi from her thoughts. “Cusi has fallen asleep!” The girls broke into laughter and, blushing, Cusi hid the knots in her lap.

“Enough!” the teacher said to quiet the class. “Cusi, please step outside.”

A Secret to Treasure

When they were alone, Mamacona gestured toward the knotted wool that Cusi held behind her back. “Show me what you have made,” she said sternly. When Cusi gave her the knots, the woman’s eyes widened in alarm. “Is this a *quipu*? Women should not possess these things. You take great risk!”

“But if I knew how to use the *quipu*,” Cusi pleaded, “I could keep school records, and the royal merchants could no longer cheat us when buying our *vicuña* robes.”

Mamacona struggled with her thoughts. She knew well the ban against women using the *quipu*, but she herself had possessed this thirst for knowledge when she was a girl. She recalled how her brother had secretly taught her to keep accounts with the *quipu*. In the end, she was won over by Cusi’s hopeful plea.

“I will teach you to make a *quipu* properly,” she whispered. Cusi’s face lit up. “*But* ... you must promise never to tell anyone!”

Cusi hugged her teacher. “Thank you, Mamacona. I promise. I will not disappoint you. I will learn, and I will forever keep our secret!”

Make Connections

Talk about the importance of wool and weaving in the Inca culture. ESSENTIAL QUESTION

Describe a time when you learned something you had wanted to know for a long time. TEXT TO SELF

**TOEFL Junior:**

ban

counting (count)

display

drifted (drift)

essentials (essential)

gazed (gaze)

gestured (gesture)

glimpsed (glimpse)

herds (herd)

highlight

knotted/ knotting/ knots (knot)

knowledge

merchant

nonsense

number

properly(proper)

value

vibrant(vibrate)

weave/weavers(weave)

**TOEFL:**

arrangements(arrange)

attend

contentedly (content)

darting (dart)

deftly (deft)

expertise

fascinated(fascinate)

forbidden(forbid)

gazed (gaze)

gleaming (gleam)

glided (glide)

highlight

patiently(patient/ patience/ impatient)

legacy

nonsense

plea

precious

pretending (pretend)

privilege

recalled（recall）

shear

sighed (sigh)

sneer

startled (startle)

symmetry

textiles(textile)

vibrant(vibrate)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 2 Week 5

“Ozymandias”

Ozymandias

I met a traveler from an antique land

Who said: “Two vast and trunkless legs of stone

Stand in the desert... Near them, on the sand,

Half sunk, a shattered visage lies, whose frown,

And wrinkled lip, and sneer of cold command,

Tell that its sculptor well those passions read

Which yet survive, stamped on these lifeless things,

The hand that mocked them, and the heart that fed:

And on the pedestal these words appear:

‘My name is Ozymandias, king of kings:

Look on my works, ye Mighty, and despair!’

Nothing beside remains. Round the decay

Of that colossal wreck, boundless and bare

The lone and level sands stretch far away.”

---Percy Bysshe Shelley

Lifelong Friends

When I was but a lad of ten,

I joined the world of working men,

Apprentice was the name I took,

I learned the way to print a book.

The print shop had an air of gloom,

And sunlight seemed to shun the room,

My master was a man I feared,

He raged at me and pulled his beard.

The printing press was friend to me,

Majestic as a mighty tree,

And so I grew to love that place,

My heart would sing, my pulse would race.

Each time I worked with type and ink,

I always trembled just to think

That all those many rows of words

Would soon fly up and out like birds.

Those books were tutors glad to share

Their words with people everywhere,

So many books for eager hands,

For rich and poor in many lands.

Though now my youth has passed away,

And near the hearth I spend my day,

When I’m forlorn, I contemplate

The many books I helped create.

As I commemorate my past,

One view of mine will always last:

Each book a lifelong friend might be

To someone, yes, but most to me.

---Constance Andrea Keremes

Make Connections

Talk about the way in which the past affects the speaker in each poem, ESSENTIAL QUESTION

Explain how reflecting on the past could have an influence on you in the present, TEXT TO SELF

**TOEFL Junior:**

race

**TOEFL:**

antique

bare

boundless (bound)

colossal

contemplate

decay

forlorn

frown

gloom

tremble

mocked (mock)

shattered(shatter)

shun

sneer

vast

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 1

The Rockers Build a Soccer Field

A Dream to Share

“*Buenos diás*, Mariana,” Mr. Sanchez greeted his daughter at the breakfast table. “*Dormiste bien*?”

“I slept very well, Papa. I had a dream that I scored the winning goal on a brand new soccer field!”

Mr. Sanchez smiled and said, “Your dream could be a sign that River Edge will finally get a regulation soccer field. Maybe you have special insight into what will happen at tonight’s Town Council meeting. Remember, we must get the whole team there to convince them we need a better field.”

That night, Mariana and her father arrived at the meeting hall to find it filled to capacity. They sat with the other River Edge Rockers, their community soccer team. Councilwoman Maloof opened the discussion, and Mr. Boyd, the Rockers’ manager, spoke first. “Our team currently practices in a tiny school yard, and only when it’s not already booked.” The team nodded briskly.

Mrs. Yamagata, owner of Something Sushi, walked to the podium. “I believe the town owns an empty lot next to my restaurant,” she said. “Couldn’t that be a soccer field?” The Rockers applauded.

“A soccer field would be a good use for that lot,” Councilwoman Maloof said. “But the town simply doesn’t have the money to build and maintain one.”

“The Rockers can do it!” Jamil spoke up.

“Jamil’s right,” Mr. Sanchez said. He began to negotiate with the Council. “If the town lets the Rockers use the vacant lot, *we* will turn it into a soccer field.”

After some discussion, the Council reached a decision. “We hereby approve using the vacant lot adjacent to Something Sushi for a community soccer field!” Mariana looked nervously at her cheering teammates, then at her father. Mr. Sanchez winked at her, as if to say, “Didn’t you have a dream?”

Dirty Dogs Raise Funds

The following day, at Something Sushi, the team got together to share ideas for raising money. “A karaoke night would be fun,” said Mariana.

“Cool!" Jamil shouted, “I’ll get to show off my incredible voice.”

“Next idea ---- *please*!” the team’s goalie, Benny Chan, joked.

“What about a car wash?” suggested Mr. Boyd.

“That’s good,” Benny said, “except the Environment Club is already having one.” Then suddenly he shouted, “Hey, let’s have a DOG wash!” Everyone thought it was a great idea ---- until they met the dirty dogs.

On the day of the dog wash, dog owners lined up in the middle school parking lot, where six wading pools had been set up. Mariana began washing a la shaggy dog, shielding herself from the suds that flew each time the dog shook himself off. Suddenly, a poodle Jamil was washing jumped out of the pool to chase a dachshund. Then several others took off, barking and tangling their leashes

Mr. Boyd was not amused. “Owners, control your dogs!” After this near disaster, things settled into a routine. By the end of the day, the Rockers were soaked through but ecstatic about raising $750.

This Lot Rocks!

A week later, the team gathered at the lot, carrying tools purchased with their earnings. Staring at the fallow field of dirt, rubble, and weeds Mariana thought, “This bears no resemblance to the soccer field in my dream.” But she kicked into action with the others, scooping up debris and depositing it in a rented dumpster.

Then Mariana bent down to pick up a rock. She grunted when it wouldn’t budge. Jamil helped her shovel around it until they saw it was a huge boulder. Mr. Sanchez studied it. “*Esta roca es enorme*. We need a bigger tool.” All were awed when he returned a while later with a backhoe.

After the boulder had been extracted, they all looked into the gaping hole. “Let’s haul in dirt from the perimeter,” Jamil proposed. It took a while, but with everyone working together they moved enough soil from the fields edges to fill the hole. In the next few weeks, the Rockers even enlisted neighbors to donate materials for a drainage system, sod for grass, and bleachers.

Opening day attracted a huge crowd of soccer fans, all enthralled by the new field. Before the game, the Rockers huddled together. “We did it. Together we turned an unseemly lot into our ‘field of dreams,’” Mr. Boyd said “Now let’s get out there!”

Later, as the dock was running out on the 0-0 score, Mariana kicked the ball hard. When she saw it slip through the opposing goalie’s hands, she realized that her dream had actually come true!

Make Connections

Tell how sharing ideas helps build the soccer field. ESSENTIAL QUESTION

When has working with others helped you accomplish a goal? TEXT TO SELF

**TOEFL Junior:**

depositing (deposit)

dumpster (dump)

gaping (gap)

slip

**TOEFL:**

adjacent

capacity

community

applauded(applaud)

approve

awed (awe)

bent

briskly (brick)

budge

currently (current)

depositing (deposit)

donate

enlisted (enlist)

enthralled (enthral)

funds (fund)

gaping (gap)

haul

unseemly

leashes (leash)

maintain

negotiate

proposed (propose)

purchased (purchase)

routine

scooping (scoop)

shielding(shield)

vacant

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 2

Facing the Storm

Isabel Moreno sat carefully inserting papers into a folder. She had been at the Gateway Nature Center’s office all morning and was weary of filing. She wanted desperately to work with the animals, especially the injured birds that the center rehabilitated. But her mom, who was the assistant director of the center, said Isabel was too young and there was no time to supervise her.

“I’ve been a weekend volunteer this whole school year,” Isabel thought. “I know more about birds than almost anyone here,” she said to herself with conviction, recalling as evidence the extensive research she had done reading books and web sites on natural history. Then she sighed. She had never been good at speaking up for herself, and who would listen to a shy seventh grader anyway?

Suddenly, the quiet was shattered by Amy Jensen bursting in and letting the door slam. Isabel felt herself shrink. Amy, who had been a volunteer a bit longer than Isabel, was 16 and strutted around like she owned the place. “Hey, Isabel, I’ve got a job for you,” she barked, planting a hand on Isabel’s shoulder.

Isabel recoiled from Amy’s touch, but she willed herself to remain still. “Don’t make trouble,” she reminded herself, though she would have loved to brush Amy’s hand off.” I have to finish this filing,” she squeaked feebly.

Just then, Isabel’s mother rushed into the room with Mr. Garza, the custodian. “The hurricane forecast for Miami has skewed to the south and is entering the Gulf,” Mrs. Moreno reported. “We should be okay up here in the inlet, but we'll likely get some fierce and persistent winds. I’ve sent the other volunteers home, but I need you girls to help Mr. Garza get the storm shutters down in here and in the aviary. Then I’ll take you home.” Isabel leaped to her feet, excited to have an opportunity to help the birds.

Mrs. Moreno’s cell phone jangled, and she answered it at once, listening intently: “Change of plans,” she announced as she hung up. “The winds are worse than expected along the coastline, so the Gulf Shore Preserve needs help preparing for the storm. I’ve got to go down there with the staff. We’ll take the inlet bridge, so we shouldn’t be gone long. Stay inside with Mr. Garza after you get the storm shutters down. And call me on my cell if there are any problems,” she directed as she dashed out.

Amy crowed that she was now “in charge.” Isabel groaned inwardly, but said nothing. Mr. Garza and the girls worked quickly and were soon back inside, listening to the wind batter and rattle the shutters. When Mr. Garza found an emergency weather report on the computer, a worried expression crossed his face. °A storm surge is heading our way, right up the inlet/7 he announced. "We’re in for some flooding.

Authoritative as ever, Amy called Isabel's mother to tell her the news, but she sounded flustered when she hung up. “The surge has flooded the bridge, and they’re stuck there!” she gasped. “What do we do?”

Isabel was unnerved that both Mr. Garza and Amy seemed so panicked, but after silently considering the dilemma for a few seconds, she roused herself and said calmly, “We should move the birds to the reptile house. It’s on higher ground.” As she strode out of the building with Mr. Garza and Amy following, she caught a glimpse of the satellite image on the computer. The vastness of the storm nearly filled the entire Gulf now.

Once inside the aviary, Isabel watched Amy lunge from cage to cage, agitating the birds. “Don’t jump around so much!” Isabel instructed. “They’re scared enough as it is, and your sudden movements aren’t helping.” Amy meekly calmed down, but she was shaking.

“Just think about the birds,” Isabel said as they carried each cage up to the reptile house. The hawks screeched and beat their wings when they felt the wind. Isabel spoke soothingly to them, and they soon grew calmer. Amy watched in awe and tried to mimic Isabel’s tone. Just as the water in the bird house had risen to their shins, they finished relocating the birds and waited inside the reptile house for the storm to subside.

After several hours, the water had receded, and Mrs. Moreno was able to return to the center. She expressed concern that she’d left them alone for so long, but Mr. Garza reassured her that Isabel’s foresight and cool thinking had saved the birds.

Mrs. Moreno gazed at her daughter admiringly. “How did you summon such confidence and courage?” she asked Isabel.

“I’m not sure,” Isabel admitted. “All I could think about was how scared the birds must have felt in their cages, and I just took charge.”

“I’m proud of you, Isabel,” said Mrs. Moreno.

Isabel paused a second. “I guess rm proud of myself, Mom!”

Make Connections

Talk about how Isabel was transformed during the hurricane. ESSENTIAL QUESTION

Describe a time when you showed unexpected courage. TEXT TO SELF

**TOEFL Junior:**

authoritative (authority)

entering (entry)

gazed (gaze)

glimpse

higher (height)

opportunity

volunteer/volunteers(volunteer)

**TOEFL:**

assistant (assist)

reassured (assure)

authoritative (authority)

admiringly (admiring)

admitted (admit)

announced(announce)

authoritative

awe

batter

concern

confidence

conviction (convict)

dilemma

director (direct)

extensive

flustered(fluster)

foresight

gasped (gasp)

gazed (gaze)

hurricane

injured (injure)

inserting (insert)

instructed (instruct)

transformed (transform)

meekly

opportunity

persistent

preserve

recalling (recall)

recoiled (recoil)

rehabilitated (rehabilitate)

reminded (remind)

scared (scare)

shattered(shatter)

shrink

shy

sighed (sigh)

squeaked (squeak)

staff

summon

vastness(vast)

volunteer

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 3

Jewels from the Sea

A Life by the Sea

On their windswept island off the coast of eastern Africa, the women of Zanzibar were living much as their ancestors had. They cared for their children and cultivated their gardens. They farmed seaweed from the ocean and gathered shells to sell to tourists who visited their beautiful homeland. Some of the women worked long hours breaking rocks into gravel. Life on the Fumba Peninsula had often been hard for them. They made very little money, and some would say the women were impoverished. But they had always managed to feed their families. The ocean had provided for them, supplying abundant fish and oysters for food, and colorful shells to sell.

However, gifts from the ocean were not limitless. In the early 2000s, the women began to notice that oysters were not as plentiful as they once had been. In fact, Zanzibar’s oysters were being harvested faster than they could replenish themselves. In ten short years, the number of oysters had declined dramatically. The women worried about the uncertain future.

A Fresh Approach

The women began to look beyond the solitude of their isolated coastal villages for help. To start, they welcomed the interest of scientists who were studying marine life in the waters surrounding Zanzibar. With guidance from the scientists, the women would work together to manage the way oysters were harvested. They soon discovered they had the power to bring oyster populations back to healthy levels.

The women’s search for solutions also unearthed another new idea. The women had always discarded the oysters1 shells after removing the flesh. But visiting experts, who help communities sustain their resources, pointed out that the shells could be valuable, too. They offered to teach the women the skills needed for polishing the shells and turning them into jewelry. Before long, local residents and tourists were buying earrings, necklaces, and bracelets that the women made from shells. The income the women earned from selling jewelry was more than they had ever made before. It occurred to them that, with a little ingenuity, they had actually become businesswomen.

Building on Their Success

The women believed they could do even more. They wanted to have control of their business, not to be like a sharecropper who owns no land and so keeps only a part of the harvest. It was suggested that they join forces to cultivate *mabe* (MAH-bay) pearls, also known as “half-pearls.” These pearls are created when a bead or other irritant is placed inside a living oyster. The oyster coats the irritation with layers of a shiny substance called *nacre* (NAY-ker). The nacre later hardens into a shimmering pearl, perfectly suited for jewelry.

This new project would also work well with the plans to restore the oyster beds. Four “no-take” zones were soon established for the oysters that would produce mabe pearls. There was only one problem. The pearls had to be cultivated underwater. Even though the women had lived all their lives by the sea, they did not know how to swim! So the next step for these strong-willed women was to learn to swim.

Others in the village were impressed by the women’s determination. Many joined them to help see the project through. The first harvest of mabe pearls in 2008 was so successful that professional jewelers quickly bought up the gleaming harvest to make expensive jewelry.

Toward New Horizons

The women wanted to learn still more ways to improve their business. To do so, they would have to travel thousands of miles across the ocean. Just as learning to swim had been a first, leaving Zanzibar would be a new experience. But together they would go. In 2009, a small group flew to Newport, Rhode Island, in the U.S. to learn about designing and marketing jewelry. They met a master jeweler, who taught them how to wrap strands of fine silver wire into delicate designs around the mabe pearls. They also met people who shared tips on expanding small businesses into large ones. The women absorbed all this and brought it home with them.

The women of Zanzibar still live on their beautiful island. But today there is a difference. By working together, the women have become powerful caretakers of local natural resources and created prosperity in their community. Their hard-earned productivity will continue when they teach the next generation of young women how to accomplish great things.

Make Connections

Explain the steps that the women of Zanzibar took together to accomplish their goal. ESSENTIAL QUESTION

Talk about a time when you worked together with others to accomplish a common goal. TEXT TO SELF

**TOEFL Junior:**

accomplish

approach

continue (continual)

declined (decline)

expanding (expand)

expensive (expense)

generation

interior

isolated (isolate)

number

pearl

professional

provided (provide)

valuable

wire(wireless)

**TOEFL:**

absorbed (absorb)

abundant

cultivated (cultivate)

delicate

designing (design)

determination (determine)

discarded (discard)

expanding(expand/ expansive)

gleaming (gleam)

harvested(harvest)

interior

isolated (isolate)

unearthed (unearth)

marine

peninsula

perfectly (perfect)

prosperity

replenish

residents (resident)

restore

solitude

sustain

zones (zone)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 4

Marian Anderson: Struggles and Triumphs

A Voice of Great Promise

On February 27,1897, a baby girl came into the world, crying with all her might. No one knew then that this voice would one day move mountains. It was not easy for an African American born at the turn of the twentieth century to follow her dream. But Marian Anderson would become one of the greatest singers of her time.

There were many opportunities for young Marian to explore her musical talent in her Philadelphia, Pennsylvania, neighborhood. She began singing in her local church choir at the age of six, but because she was such an adept singer, she was soon invited to perform outside of church. The Philadelphia Choral Society even awarded her $500 to take singing lessons. With such advantages, Marian was shocked by her first experience of racism.

Racism and Rejection

After graduating high school, Marian went to the admissions office of a local music school. “I want to study music here,” she told the young clerk. When the clerk told her that African-American students were not accepted at the school, Marian was stunned, but she didn’t argue. She wondered, “How can someone surrounded by the beauty of music be so full of hatred?”

The rejection did not stop the singer. Marian’s church donated money for her to study with Giuseppe Boghetti, a famous voice teacher. In 1925, Boghetti entered Marian in a voice contest in which she competed against 300 others to win the honor of singing with the New York Philharmonic orchestra.

Unfortunately, her next big performance in New York City was not so successful. Because she was black, very few people came to hear her. Some critics found her performance to be “lacking.” As a result, fewer people asked her to sing concerts.

It seemed that Marian’s career was over. The discrimination she encountered at the music school could be found nearly everywhere in the United States. Many white audiences refused to hear African-American performers, and many concert halls would not allow black singers to perform. “If I cannot sing in America,” Marian told herself, “I will go to Europe.” She left in 1930, hoping that audiences overseas would give her a chance.

To Europe ---- And Back Again

In Europe, prominent composers and conductors praised Marian. Audiences flocked to hear her. To them, she was musical aristocracy, one of the most gifted singers even A man named Sol Hurok, who saw Marian perform in Paris, became her manager. Soon he had a request. “Come back to America to sing again,” he pleaded.

“Will they ever respect me in America the way they do here?” Marian wondered. She decided to find out She returned to the same concert hall where her career had nearly ended a decade before. This time, the performance was a success.

The singer’s popularity grew, and Hurok began to book more recitals in the U.S. Still, like other African Americans at the time, Marian was not allowed to eat in many restaurants or stay in many hotels when she traveled ---- and no opera house would invite an African American to sing. But it was an act of prejudice in 1939 that gained Marian the greatest fame.

Change Did Not Come Easily

Hurok tried to arrange for Marian to sing at Constitution Hall, owned by the Daughters of the American Revolution (DAR). Though the DAR told Hurok no dates were available, they continued to book white performers. Outraged, First Lady Eleanor Roosevelt resigned from the DAR in protest. Marian’s supporters breathed a collective sigh of relief when a federal official offered her use of the Lincoln Memorial for a concert on Easter Sunday, 1939.

Marian was not sure what to do. The dignified woman was troubled by the drama of the situation. The prejudice barring her from Constitution Hall existed well beyond the concert hall’s walls. Besides, the whole idea could backfire, and American audiences might once again reject her. On the other hand, Marian understood that the concert was not just about her; it was about helping all African Americans. Should she lend her voice so that others could prevail against injustice?

Marian decided to take the chance. The concert drew nationwide attention, and Marian was stunned when nearly 75,000 spectators attended. Millions more listened to the live radio broadcast.

Fifteen long years would pass before New York's Metropolitan Opera invited Marian to sing, but she was the first African American ever to receive such acknowledgment. On opening night, even before she sang a single note, the audience applauded for five full minutes. Her performance established Marian more as a trailblazer who opened opportunities for black Americans.

The celebrated conductor Arturo Toscanini said that a voice such as Marian’s was “heard once in 100 years.” Indeed, Marian Anderson’s glorious singing, combined with her perseverance in the face of prejudice, shattered racial barriers and enriched the lives of countless people.

Make Connections

Talk about the way that Marian Anderson’s singing changed the way Americans thought about African-American performers. ESSENTIAL QUESTION

Describe how a person you know or have read about helped changed your beliefs about something. TEXT TO SELF

**TOEFL Junior:**

acknowledgment (acknowledge)

available

awarded (award)

barriers (barrier)

continued (continual)

countless (count)

decade

discrimination

encountered (encounter)

enriched

entered (entry)

glorious

graduating (graduate)

high (height)

racial

rejection(reject)

conductors(conductor)

conductor/conductors (semiconductor)

triumphs(triumph)

**TOEFL:**

acknowledgment (acknowledge)

available

adept

admissions (admission/ admit)

applauded(applaud)

aristocracy (aristocrat)

arrange

attended(attend)

barriers (barrier)

career

competed (compete)

composers (composer/ compose)

concerts (concert)

conductors (conductor)

constitution

countless

dignified

discrimination

donated (donate)

enriched (enrich)

existed (exist)

explore

glorious

hatred

triumph

opera

orchestra

outraged (outrage)

perseverance

pleaded (plead)

prevail

prominent

rejection (reject)

shattered(shatter)

sigh

spectators (spectator)

stunned (stun)

talent

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 3 Week 5

Is Your City Green?

Is Your City Green?

These days, people are trying to be better stewards, or caretakers, of Earth by living in a “green” way. Advocates of living in greener communities believe the advantages far outweigh any drawbacks. They think it is irrational to delay solving environmental problems. They say we can use ideas and technologies available right now to create the city of the future today.

Buildings with Green Roofs

Modern buildings in the green city of the future are designed to save water and energy. Outdated buildings of the past were not. Rooftops covered with grass and other living plants provide insulation that keeps buildings cooler. These roofs can also collect, filter, and reuse rainwater that would otherwise be wasted.

Clean Energy

It is commonplace in the green city to use sources of energy that are renewable and cause no pollution. Solar panels convert the Sun’s energy into electric power. Huge turbines generate electricity by harvesting the wind’s energy on nearby wind farms. Even rivers are harnessed to produce electricity, and geothermal energy from deep within Earth is used to heat homes.

What you won’t find in this city are gas stations on every comer. Tax breaks encourage people to use clean energy. And government agencies impose fees on the sale of fossil fuels to discourage their use.

Moving Right Along

Most people in the green city of the future designate mass transit as their preferred method of travel. Since passengers who have chosen to ride trains are not driving their cars, less fuel is burned. Any private cars still in use are hybrid or plug-in electric vehicles. Hybrid cars run on both fuel and batteries. Some electric cars do not use gas at all. Instead, owners plug their cars into standard electrical outlets to charge the batteries.

In the green city, many cars, trucks, and buses bum fuels made from renewable sources rather than oil. For example, a biofuel called ethanol is made from com and sugar cane crops. Biodiesel is made from soybean oil, animal fat, or even cooking grease!

Open Spaces

Citizens of the green city understand that protecting I native species is key to conserving natural spaces. Because native plants are I original to the ecosystem, they provide the optimal habitat for local insects, birds, and other animals. Native plants that are well adapted to the local climate also require less water. Alien, or imported, plants are quickly identified and removed. Otherwise, they may become invasive and overwhelm local species.

Residents recognize that a process called *composting* helps reduce the amount of solid waste that is sent to landfills. It also increases the richness of local soil. People mix food scraps and yard waste with water and air in large bins. Helpful bacteria and fungi then break down this pile of “garbage” into an eco-friendly and economical fertilizer that improves the health of city parks and backyards.

**TOEFL Junior:**

adapted (adapt)

available

conserving (conservation)

driving (driver)

fertilizer

garbage

generate

identified (identify)

impose

invasive (invade)

provide

remove(removal)

**TOEFL:**

advocates (advocate)

available

alien

climate

conserving (conserve)

convert

outdated

delay

designate

drawbacks (drawback)

economical (economic)

fertilizer

grease

harnessed(harness)

harvesting(harvest)

hybrid

identified(identify)

invasive (invade)

mass

original

process

recognize

removed (remove)

scraps (scrap)

solar

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 1

The Day the Dam Broke

**Down in the Valley**

Johnstown, Pennsylvania, lies in a beautiful valley in the Appalachian Mountains. Two rivers flank the town, so in the early 1800s people began using the water power to run grist mills for grinding flour.

By 1834, Johnstown had become a key junction on the Pennsylvania Canal System. Many new businesses were generated. The new prosperity was enough to offset any hardships caused by periodic flooding when the rivers swelled with snow melt and heavy spring rains. For Johnstown’s residents, moving to higher ground until the water receded was an inconvenience they could tolerate.

The Stage Is Set

To supply water to the Canal System during dry seasons, the state built a rock-and-earth dam 14 miles upstream from Johnstown on the Conemaugh River. At the dam’s base, a drain fed water into the canal But excess water from the lake behind the dam could also run off a spillway.

By 1852, both canal and dam were abandoned when the Pennsylvania Railroad completed a line between Johnstown and Pittsburgh. In 1875, a man named Benjamin Ruff bought the property around the lake to build an exclusive resort called the South Fork Fishing and Hunting Club.

Ruff repaired the dam and stocked the lake with fish. But valves and pipes previously laid in careful alignment to control the water flow were removed, and the drain beneath the dam was filled in. The dam’s lip was lowered by two feet when the road on top was widened, and the spillway was screened in from a bridge above to keep fish from escaping. Unknowingly, Ruff had set the stage for disaster.

A Tremendous Roar

On May 30, 1889, the worst storm ever recorded in Johnstown’s history hit the area. Nearly 10 inches of rain fell in just 24 hours. The next morning, the rivers around Johnstown swelled into roaring torrents. As they had so many times before, residents moved to higher ground to wait out the flood.

Upriver, South Fork Club members feared the dam would fall if the lake rose any higher. Workers frantically tried to strengthen the dam. Men were sent to Johnstown to warn people. But the townspeople had heard too many such alarms over the years and they ignored the warnings.

Just after 3:00 P.M., the dam collapsed. Club members watched in horror as a 40-foot wave, about 20 million tons of water a half-mile wide, crashed down the river valley. Within minutes, the flood devoured four small towns. In less than an hour, it roared into Johnstown. Most people saw nothing. They heard only a thunderous rumble. But then the water was upon them.

Those not instantly killed were swept away by the angry surge. A jumbled mass of water, houses, trees, train cars, animals, and people smashed into the stone arches of the railroad bridge downriver. Anyone still alive at that point met with prolonged torment when the debris caught fire. Many more died. That evening, a telegraph message arrived in Pittsburgh from Robert Pitcairn, railroad superintendent and a member of the South Fork Club. It said simply, “Johnstown is annihilated.”

Primary Sources

Sources of information are considered primary if they come from people living at the time of the event described. Examples include letters, eye-witness accounts, photographs, newspaper articles, and government documents.

There are many first-hand accounts by survivors of the 1889 Johnstown flood. Gertrude Quinn Slattery, for example, was only six years old at the time, but she later recalled being swept away on a “raft with a muddy mattress and bedding.” Like others, she remembered “holding on for dear life ... ” Thankfully, she lived to tell her story.

Facts About the 1889 Johnstown Flood

2,209 people killed, including 99 entire families

1,600 homes destroyed $17 million in property damage

debris at the bridge covered 30

acres and was 40 feet high

After the Flood

Response was swift as news spread. People around the world sent money, food, and clothing. The recently created Red Cross arrived to help survivors. Down, but not defeated, the people of Johnstown showed great tenacity. They set up tents and began to rebuild.

The 1889 flood is among the worst disasters in American history. Many blamed the South Fork Club for causing the calamity with its mishandling of the dam. The people of Johnstown sued. But the courts ruled the flood an accident and awarded no money. Some club members contributed to relief efforts. Andrew Carnegie donated $10,000 and rebuilt the town’s library. Other members remained silent.

When another flood hit Johnstown in 1936, the federal government paid to have the rivers re-routed. Johnstown residents rebuilt once again, believing there would be no more floods. But on July 20, 1977, nearly 12 inches of rain fell in 10 hours. Six dams burst, pouring 128 million gallons of water into Johnstown.

This time, many people moved, and businesses closed for good. Like an eclipse darkening the sky, the 1977 flood dimmed Johnstown’s future.

Today, key activities help reduce the danger to Johnstown. The National Weather Service sponsors a flood watchers program, and studies are done to identify weaknesses in the flood protection systems. But there is also an emergency plan, just in case the waters overrun Johnstown again.

Make Connections

How did the people of Johnstown respond to the challenges of flooding? ESSENTIAL QUESTION

Talk about a disaster you have heard or read about. Tell how people responded to the challenges they faced from the environment. TEXT TO SELF

**TOEFL Junior:**

awarded (award)

completed (complete)

during (duration)

excess

exclusive

gallons (gallon)

generated (generate)

high/ higher (height)

horror

identify

primary

remove(removal)

smashed (smash)

spillway(spill)

sponsors(sponsor)

valley

witness

calamity

**TOEFL:**

abandoned (abandon)

challenge

collapsed (collapse)

annihilated(annihilate)

articles(article)

blamed (blame)

calamity

clothing

inconvenience (convenience)

crashed (crash)

devoured (devour)

donated (donate)

excess

exclusive

eyewitness

grinding (grind)

horror

identify

ignored(ignore)

tolerate

torment

tremendous

jumbled (jumble)

junction

mass

previously (previous)

primary

prolonged (prolong)

prosperity

recalled (recall)

residents (resident)

rumble

screened (screen)

smashed (smash)

strengthen

superintendent

swelled (swell)

swift

warn

witness

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 2

She Had to Walk Before She Could Run

In a crowded Olympic stadium, the gun sounded and Wilma Rudolph took off like a bolt of lightning. As this amazing athlete ran confidently around the track, she never lost her cool. Sprinting toward the finish line, Wilma used her peripheral vision to ensure that her competitors would not catch up. The crowd roared with elation as “the fastest woman in the world” finished more than three yards ahead of the other athletes.

*Against All Odds*

Though Wilma Rudolph inspired many during that 1960 Summer Olympics in Rome, Italy, her childhood had been riddled with hardships. Wilma was one of 22 children born to an impoverished Tennessee family. While she was a toddler, her health deteriorated because of life-threatening illnesses.

When she was four years old, Wilma contracted polio, a severe disease that causes paralysis. As a result, Wilma lost the use of her left leg. Having polio could have been devastating for Wilma. Instead, she faced this physical challenge with a positive attitude and never lost sight of her goal.

Wilma’s mother taught her very early to believe she could achieve any goal, and the first was to walk without leg braces. Once a week, she drove Wilma 90 miles round-trip to Nashville for physical therapy. Her mother also instructed Wilma^ siblings on how to massage their sister’s legs. Done several times a day, this monotonous routine continued for several years.

*An Inspiring Comeback*

Wilma’s doctors had little hope that she would ever be able to walk again. When she was nine years old, they decided to assess her progress. After the doctors removed the braces, they were amazed to see that Wilma could walk on her own. They were stunned by what this young girl could do despite having contracted a crippling disease for which there was no cure.

From then on, Wilma never looked back. To compensate for the years she had been in braces, Wilma became extremely active. As proof of her determination, she ran everyday. She decided never to give up, no matter what happened.

Wilma’s brothers set up a basketball hoop in the backyard, and she and her siblings played all day. Wilma became an avid basketball player at school, too. A track coach named Ed Temple from Tennessee State University spotted Wilma at a basketball tournament and was extremely impressed by her athletic ability and potential. He invited her to attend a sports camp. Once again, Wilma’s life changed dramatically, this time for the better.

*An Olympic Champion*

The minute Wilma ran on a track, she loved it. When she was at the 1960 games just sixteen years old, she qualified for the 1956 Summer Olympic Games in Melbourne, Australia. And Wilma came home wearing the bronze medal she had won in the relay race.

After high school, Wilma was awarded a full scholarship to major in education at Tennessee State University. But once again, Wilma had to overcome challenges. In 1958, having put her shoulder to the wheel both in class and during track-and-field events, she became too ill to run. After she had a tonsillectomy, however, she felt better and started to run again. Unfortunately, Wilma pulled a muscle at a track meet in 1959, and Coach Temple had to implement a plan for her recovery. Wilma recovered just in time to qualify for the 1960 Summer Olympics in Rome.

In her individual sprints, Wilma outshone her competition and won two gold medals with ease. During the relay event, however, the team comprised of four athletes from Tennessee State found themselves in hot water. After a poor baton pass, Wilma had to pick up her pace and run like the wind to complete the last leg of the race. She successfully overtook Germany’s last runner to win the race. Wilma became the first American woman in track and field to win three gold medals. Of her feeling of accomplishment, she said she knew it was something “nobody could ever take away from me, ever.”

*Giving Back*

The summit of Wilma's career might have been her achievements as an Olympic athlete. Instead, she went on to accomplish much more. After graduating from college, she taught school and coached track. Soon Wilma was traveling the country, giving speeches to school audiences.

To inspire others to do their best in spite of all challenges, she would note that “the triumph can’t be had without the struggle.” Wilma achieved her dreams and, ever after, helped others to reach theirs.

Make Connections

Talk about how Wilma met personal challenges to become a successful athlete. ESSENTIAL QUESTIONS

Describe a time when someone you know had a personal challenge and overcame it. TEXT TO SELF

**TOEFL Junior:**

accomplish

awarded (award)

coached (coach)

complete

continued (continual)

displays (display)

drove (driver)

during (duration)

graduating (graduate)

high (height)

individual

race

remove (removal)

severe

spotted (spot)

triumph

**TOEFL:**

achieve

assess

challenge

athletes/athlete(athlete)

attend

avid

braces (brace)

comprised (comprise)

confidently (confident)

contracted (contract)

determination (determine)

elation

implement

instructed (instruct)

triumph

monotonous

potential

qualified (qualify)

recovery (recover)

removed (remove)

riddled (riddle)

routine

scholarship (scholar)

severe

spotted (spot)

statistics

stunned (stun)

summit

life-threatening(threaten)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 3

Treasure in the Attic

SCENE 1 *The attic of Liz’s house; Liz and Emma are kneeling.*

Emma (*looking through a box*): We’ll never get through all this stuff!

Liz: We have to. I need twenty-five more dollars for that new bike. My dad says we can sell at a yard sale anything we find up here. You can keep half of whatever we make.

Emma (*coughing*): I know. I just didn’t realize it would entail breathing in so much dust.

Liz (*with enthusiasm*): I don’t think anyone has looked at Grandpa’s and Grandma’s stuff since they moved to Florida. There’s a multitude of treasures up here.

Emma: Be on the lookout for a pair of pearl earrings. Grandma says Great-Grandma forgot what she did with them. You’re supposed to inherit them, since you’re the oldest heir among the grandkids.

Liz: Wow. I hope they’re worth a lot of money!

Emma: If I had something of Great-Grandma’s, I’d never sell it.

Liz (*finding an old diary, flipping pages*): Wow, a diary! Listen to this: (reading) “October 7, 1936. I feel such empathy for Anna Snow and her family. They may have to leave us to find work elsewhere. This terrible Depression has bred such suffering for our neighbors. We are fortunate that Albert’s income is not solely dependent on local business. My new endeavor is to be Anna’s benefactor. If I gave her my pearl earrings, Anna could sell them to pay debts. She’d surely do the same for me. But can I? Albert would never approve if I gave away his wedding gift to me. Yet I must do it! It will be our secret ---- Anna’s and mine...”

Emma (*excitedly*): So that’s what happened to Great-Grandma’s earrings! Anna Snow must have been a wonderful friend. Could hers be the same family that owns Snow's General Store?

Liz: Let’s go find out.

SCEN E 2 *Snow’s General Store; enter Liz and Emma.*

Mr. Snow: Good morning. May I help you young ladies?

Emma (*tentatively*): Um... Mr. Snow, we were wondering if you might be related to Anna Snow.

Mr. Snow: Yes, I’m her grandson. Why do you ask?

Liz: We’re trying to solve a mystery. Our great-grandmother, Flossie Howard, was a good friend of your grandmother’s. She wrote about her in a diary she kept. (*She shows the diary to Mr. Snow*.)

Mr. Snow: Flossie Howard, you say? That name rings a bell, but I can’t quite place it. There were lots of Howards in town in those days.

Liz (*with disappointment*): Well...thanks anyway.

Mr. Snow: I do hope you solve your mystery.

SCEN E 3 *Liz’s yard, a few days later; the girls are setting items out for the yard sale as neighbors arrive*.

Emma: Look, Liz. Isn’t that Mr. Snow from the store? I wonder what he’s doing here.

Mr. Snow: Hello, girls. I think this might belong to you. (H*e hands Liz a small yellowed envelope*.)

Liz (*reading*): “For Flossie.”

Mr. Snow: I knew I’d heard that name somewhere. After you left, I found that envelope tucked away in the back of the store safe.

Liz (*opens the envelope, finds a note and the pearl earrings; reading*): “Dearest Flossie, I can’t tell you how much I appreciate the gesture. But I can’t accept this kindest of offers. The earrings are yours and too lovely to part with.”

Mr. Snow: Her brother Bert took charge of the store when she and Granddad left. In all the hubbub, I guess she forgot she’d stowed the earrings in the safe. And she never did come back.

Liz: Even so, they’ve been secure all these years. Thanks very much, Mr. Snow.

Yard Sale Customer: Those earrings are lovely. Would you take twenty-five dollars for them?

Liz: Twenty-five dollars? I could get my new bike.

Emma: But the earrings are family heirlooms! And we don't even know what they’re worth.

Liz (*to herself, seized by indecision*): I’d really like the money for the bike. But... maybe Emma’s right. They are Great-Grandma’s earrings. (*to Yard Sale Customer*) Sorry, ma’am, they’re not for sale, (*to Emma*) We should each keep one. I’ll earn money for the bike some other way. Hey, I’ll bet the *basement* could use an extensive cleaning out!

Make Connections

Talk about the decisions that the characters, both past and present, find difficult to make. ESSENTIAL QUESTION

Talk about what you had to consider at a time when you made a difficult decision. TEXT TO SELF

**TOEFL Junior:**

bred (breed)

enthusiasm

enter (entry)

gesture

pearl

secure

stuff

**TOEFL:**

appreciate

approve

benefactor

bred (breed)

debts (debt)

dependent

depression (depress)

entail

enthusiasm

extensive

flipping (flip)

hubbub

multitude

seized(seize)

solely (sole)

tentatively(tentative)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 4

My Visit to Arizona

*Silvina and her parents have traveled from their ranch in Argentina to one in Arizona. The trip reunites Silvina’s father with his college friend, Mr. Gomez. While her parents share ideas about raising cattle, Silvina spends her days with the Gomez boys, Mike and Cad, and their grandfather.*

Shocking

----*Short Sharp Shocks. Try to say it three times fast.*

My English tutor at home taught me that tongue twister. How perfectly it describes my arrival in Arizona!

Shock 1: We are staying on the hot, dusty Gomez Ranch.

My family travels so much, I think we are nomadic.

But usually we sleep in nice, air-conditioned hotels.

Shock 2: People here think I can ride horses.

Do I tell them the only saddle I have used is on a bicycle?

And that I am more inclined to read books about horses?

Shock 3: English lessons do not automatically prepare you to understand the way people speak in Arizona.

----*Pull up a chair and get comfy*,says Grampa G.

But the chairs are too big for me to lift. And who is Comfy?

Must everyone here talk so fast?

Nodding and Smiling

----*Our ranch covers 150 acres*, Grampa G says. *Permit me to show you around*.

I am thinking, Show me a round *what*? but there is no time to ask, because he is pushing me toward an army of cattle.

----*Here’s the finest herd in the Southwest, ‘bout 200 strong*.

I think Grampa G would make an excellent mentor, if only I understood half of all he is chattering about.

I nod and smile and pretend I understand.

I lift my camera to take a photo of him with a big steer.

At least I am not the only one nodding and smiling now.

----*Here’s a sturdy fellow*, says Grampa G. *The strongest horse for miles*.

He leads the biggest, blackest horse I have ever seen right up to me.

----*Silvina, let me present Stormy to you*.

I stare in disbelief. Is he giving me a horse?

Say something, Silvina. Say something, quick!

----*Thank you, but I cannot accept such a big present*, I sputter.

Grampa G laughs and laughs.

Finally, he stops laughing and tells me what is so funny.

Apparently, *PKES*ent and pre*SENT* are two different words.

I will never learn English!

Riding and Reading

It has happened: Mike discovered I never rode a horse.

Now he and Carl want me to ride that beast Stormy.

----*Riding’s a cinch*, says Mike. *Easy as falling out of bed*.

Or off a cliff, I think. But I do not say that.

----*He looks like the wild horse from* The Black Stallion, I say.

----*I love that book*! shouts Carl.

I tell him how I read it in English class, and he forgets all about putting me on Stormy and we talk about books instead.

What a relief! I am content for the first time in days.

----*So, Silvina, you ready to ride Stormy*? interrupts Mike.

Goodbye, contentment. Can my camera save me again?

I point it at the brothers standing next to the black colossus.

Suddenly Carl runs to the house and brings out a camera.

----*Hey, can you show me how to work this thing*? he asks. *I got it last month and never figured it out*.

At last, something I can do!

Six weeks later, we are all sitting around a campfire, each roasting a marshmallow on a glowing ember.

----*These would go well with* dulce de leche, I say.

For once, Mike and Carl look confused instead of me.

----*A very delicious caramel*, I explain. *It is good on anything*.

Carl uses his camera to take a panoramic shot of the desert

Then he takes one of this international group of friends, who are laughing and talking with an easy rapport.

I will place those photos in a digital scrapbook with the one of me riding Stormy.

I still prefer reading to riding, but I am glad I can do both.

My adjustment to Arizona was slow, but I learned so much!

Make Connections

Talk about how Silvina discovers what she has in common with the Gomez family. ESSENTIAL QUESTION

Describe a time when you learned how to adjust to new people or a new place. TEXT TO SELF

**TOEFL Junior:**

apparently (apparent)

automatically (automatic)

cliff

herd

twister(twist)

**TOEFL:**

adjustment (adjust)

apparently (apparent)

air-conditioned (air-condition)

confused (confuse)

content/ contentment

desert

inclined (incline)

interrupts (interrupt)

permit

pretend

raising (raise)

sturdy

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 4 Week 5

“Hey Nilda”

Hey Nilda,

By now you’re wondering, worrying

Why I’ve seemed so weird this week --- not calling you, not texting,

Slipping silently past you in the hall at school,

Pretending to listen to music or checking my watch.

Outside, with classes over,

I’ve made a beeline for the bus,

Other kids, eager to leave,

Hustle and rush, sling free and gleeful.

But not me.

I hide behind my hair.

Essential Question

How can we take responsibility?

Read a poet’s view of being responsible in a friendship.

Here at home, my secret doesn’t sit so well.

Once you know what I did,

You’ll see red

I know I’m answerable to you,

I have an obligation to make it right

So here’s what happened:

You think someone stole your camera...

No, I borrowed it without asking ---- Just to try it out, but

Then I lost it.

I looked, looked, looked

In the laugh-loud cafeteria, the echo-hollow gym,

The bottom of my crammed and messy locker,

The plastic couches in the teachers’ lounge,

And the shush-quiet aisles of the library ----

Every place I could think of.

And it’s gone.

My fault

I’ll give you my allowance for the next few months.

But I wonder ---- can money mend a friendship?

Rachel

Hi Rachel,

Yep, you’re right.

I wondered why you were walking around

Like you were scared or angry or

As if you’d bee crying or trying to hide,

----Or all of the above.

Good thing I wasn’t holding anything breakable

When I read your message,

Because I might have dropped it

----Or flung it across the room.

Instead, I dropped down into our rickety recliner

And cleaned my teeth tight,

My body shaking as hard

As if I were outside

Wearing shorts in the freezing rain.

I mean, come on!

You borrowed my new camera without asking?

Then let me think it was stolen?

I thought I could trust you.

And I thought you would trust me enough

To tell me the truth.

How long have we been friends?

Since we were five, that’s how long.

We may not see eye-to-eye at times,

But we have always been honest

----With each other.

Just so you know:

I found my camera yesterday,

Stuck in a big box with some socks in the lost and found.

Let’s not blow this out of proportion,

Maybe just treat it as water under the bridge.

Start again, okay?

Still friends?

I hope so.

I’ve got two tickets to Friday’s concert, and

I don’t want to go by myself.

Nilda

----Lareine Interne

Make Connections

Talk about the ways that Rachel and Nilda express their views on taking responsibility. ESSENTIAL QUESTION

Describe a time when you took responsibility for your actions in a friendship. TEXT TO SELF

**TOEFL Junior:**

essential

slipping(slip)

treat

**TOEFL:**

checking (check)

concert

crammed (cram)

gleeful

hustle

mend

messy

pretending (pretend)

proportion

scared (scare)

weird

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 1

Thunder Helper

*The Creek are Native Americans who come from what are now Florida, Alabama, and Georgia. Their myths, passed down from generation to generation, are often about the relationship between people and the natural world.*

A long time ago, a boy and his three uncles set out from their village to go hunting. As always, the boy looked for ways to be useful to his people, so he set about catching fish in a nearby stream and gathering firewood while his uncles tracked deer. When his uncles returned, he would prepare *sofki*, a corn soup, and add the deer meat to make a mouth-watering stew.

One morning, the boy was walking toward the stream, dreaming of the tasty fish he would catch and listening to the chittering of the birds. All at once, he heard a loud roaring sound. Quickly, and as sly as a fox, he crouched, set an arrow against his bow, and readied himself for whatever might happen.

The boy crept slowly toward the eerie rumbling, until he reached the stream. There, towering above the rushing water, he saw two unearthly creatures locked in a terrifying struggle. One was dark and formless, yet seemed to be the source of the booming roar. The other, a long, wiry monster, was tightly coiled around the first.

The boy watched, his mouth agape with wonder. “The giant serpent must be the dreaded Tie-Snake!” he thought, remembering stories his elders told about the trickster that fooled people and drew them down into the murky and desolate underworld. “But who is the shapeless one? Could it be Thunder himself?” the boy wondered. In a valiant move, he raised his loaded bow and shouted to Tie-Snake, “Let go of him!”

Tie-Snake hissed back, “Boy, if you kill the evil Thunder, I will protect you always and share all the mysteries of the underworld with you”

Thunder bellowed his response. “Listen to me, boy. Tie-Snake speaks only lies. Strike him with your arrow, and I shall grant you the power to be a strong, brave, and wise warrior for your people.”

Without listening to more of Tie-Snake’s deception, the boy took aim and let his arrow fly at the serpent. Tie-Snake fell into the stream and disappeared beneath the waters. A moment later, Thunder spoke again. “Be warned. You must tell no one the source of your new power, or it will leave you.”

“I promise,” said the boy solemnly, and Thunder evaporated into thin air.

The boy’s uncles returned to camp that evening. Despite their questions about his time alone in the forest, the boy kept his promise, and his uncles remained oblivious of the power that Thunder had given him. But the boy was eager to employ his new abilities for worthy causes, and he worked hard to hone his hunting skills once he returned home. In just a few short months, to the surprise of the elders, the boy had become one of the best hunters in the village. His steadfast efforts in pursuit of food were soon recognized by all the people.

It was not long after when the Creek elders learned one of their most fearsome enemies was threatening to attack them. The boy took this opportunity to request a meeting with the village leaders. “Respected elders,” the boy said boldly. “Though I am only a boy, I have the courage and cunning to fight the enemy. Will you let me perform this deed to save our people?”

The boy’s audacity impressed the elders. They conferred among themselves and soon nodded their heads in agreement. The chief declared, “You have proven your strength and bravery with your hunting. Now, as you go alone to fight the enemy, you must demonstrate your wisdom.” With determination, the boy said, “I will not disappoint my people.”

That very evening, the boy set off through the forest to face the enemy. The villagers gathered to await his return, and as the hours passed with no word the Creek fell into a somber mood. Then suddenly, a deafening roar of thunder made the villagers cover their ears. Their eyes shot upward as flashes of lightning streaked the sky. Moments later, smoke filtered out through the trees, and the people sensed that the boy had been victorious. They rejoiced that the enemy would no longer threaten their village.

When the boy made his way out of the forest, there was much celebration in honor of his exploits. The elders called him *Menewa*, meaning “great warrior.” And from that day on, whenever the Creek heard Thunder, they knew that Menewa, his helper, was at work to keep their people safe.

Make Connections

Talk about why the characters and plot of “Thunder Helper” would appeal to listeners generation after generation? ESSENTIAL QUESTION

Tell why a myth or story you know has special meaning to you. TEXT TO SELF

**TOEFL Junior:**

await

evil

exploits (exploit)

generation

giant

grant

opportunity

**TOEFL:**

aim

appeal

boldly (bold)

bow

characters

coiled (coil)

conferred (confer)

creek

cunning

demonstrate

desolate

dreaded (dread)

evaporated (evaporate)

exploits(exploit)

towering (tower)

unearthly (unearth)

monster

opportunity

plot

sly

solemnly (solemn)

steadfast

terrifying(terrify)

threaten/threatening

valiant

warned (warn)

worthy (worth)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 2

Journey to Freedom

*It is early summer 1851, and 12-year-old Abigail Parker is still finding her way after the death of her mother the previous winter. Her father has recently made their Massachusetts farm a station on the Underground Railroad, and the two nervously await their first “delivery” of people on their way to Canada to escape slavery.*

I could not sit for being so fretful, so I paced and sometimes paused to peer out the window. Mother often said, “Patience is bitter, but its fruit is sweet.” If only I were possessed of her calm.

“I see no sign of our four guests,” Papa announced as he returned from checking outdoors, fueling my fears that they had met with misfortune. Just then, a sudden knock sounded, and my heart took to pounding as Papa opened the door to two weary women on the stoop. He assisted the older one, who appeared to be about 60, to a chair by the hearth. Her companion was maybe 14. Papa directed me to poke up the fire and fetch food and drink.

When the women got back their breath, Papa asked, “What of the others? Did they not accompany you?”

“Just Nellis and me,” the girl declared, and the older woman presented a letter.

Papa handed the crumpled paper to me, saying, “If you would, Abby. My eyes fail me in dim light.”

I brought the letter close by a candle and commenced reading: “*Dear Jonathan, I send you Nellis and Emma, separate from their two companions, who have fallen ill with fever, one seriously. We have insufficient room to hide four until they recover, so I hope you are disposed to shelter them until further transport can be arranged. Respectfully, Jacob*.”

Papa nodded and said, “We must see to their safety and comfort” I guided them to the attic hiding place and wished them a peaceful night.

Come morning, afore I entered the attic, I couldn’t help eavesdropping on the sound of choked coughing. Once inside, I shuddered when I saw Nellis’s gaunt face ---- so ill she looked. “I fear it’s the fever,” she gasped.

I summoned Papa, pleading, “She needs a doctor!”

“Think of the risk,” he scolded. “The new law allows slave catchers to come all this way north, and if we’re found harboring Nellis and Emma ---- well, retaliation could be grave. We must tend to this ourselves.”

“But I lack Mother’s know-how for curing,” whispered.

“Back in Virginia, Nellis told me ‘bout some fever herbs,” Emma spoke up.

“You daren’t go out, Emma,” Papa cautioned, “but Abby can procure what you need.” I felt near fainting, but he was resolved. “Remember,” he said to me, “the fields have eyes, and the woods have ears. Take care how you act and speak, so as not to arouse suspician.”

I left in haste with my basket, rehearsing Emma’s words about the needed herb. “Grows on edges of clearings, by streams or marshes... has dull white flowers, wrinkled leaves, and stout stem.” My search seemed endless, but finally I spied some flowers seeming to match Emma’s description. I plucked the plant and some familiar mint that I knew for sure by its smell.

As I hurried home, I met our neighbor Mr. Carrington coming opposite. “Where to in such a hurry, Miss Abigail?”

Undaunted, I spun a tale about hunting up mint for Mother’s special cake recipe, and my voice was wondrous calm as I presented a sprig “... for the Missus.” Once he’d nodded thanks and continued on, I commenced to breathe again.

At home, Emma praised my harvest as she sorted through the leaves in the basket, handing me several and bidding me to mince them fine. Then she smiled. “Mint ---- that’s good. We’ll add some to mend the taste of the fever tea.”

After Nellis drank the tea, she reclined in a comfortable doze. Emma and I watched over her, and before long we fell into voicing our worries. My own desperation from missing Mother was deeply felt and true, but I could barely fathom Emma’s fortitude in facing the rigors of slavery as she tell’d them, I confessed my doubt of ever being able to bear such hardships as those.

“It’s why folks come together. Problems shared be problems halved,” said Emma smiling. “You’ll soon enough have the strength of a grown lady like your mama.”

Nellis’s fever broke that night. As she and Emma prepared to continue their journey, they pledged infinite gratitude to Papa and me. Tho’ sad to see them go, I wished them safe passage, and I thanked Emma for aiding me so in my own journey.

Make Connections

Talk about how Abigail showed inner strength in finding the healing herb on her own. ESSENTIAL QUESTION

Describe a time when you discovered a personal strength within you that helped you to do a difficult or demanding task. TEXT TO SELF

**TOEFL Junior:**

arouse

await

cautioned (caution)

continued/ continue (continual)

disposed (dispose)

entered (entry)

gratitude

resolved (resolve)

suspicion

tend

**TOEFL:**

accompany

assisted (assist)

commenced (commence)

announced(announce)

arouse

arranged(arrange)

barely (bare)

bear

bidding

choked (choke)

crumpled (crumple)

disposed (dispose)

doubt

edges (edge)

entered (entry)

escape

fainting(faint)

familiar(familiarize)

fortitude

misfortune (fortune)

fretful (fret)

further

gasped (gasp)

gratitude (grateful)

harvest

healing(heal)

undaunted

mend

pleading (plead)

pledged (pledge)

previous

recently

resolved (resolve)

rigors (rigor)

stout

insufficient (sufficient)

summoned (summon)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 3

The Science of Silk

When the silk-making process was first developed five thousand years ago in China, silk was a rare and expensive luxury. Silk would still be sparse today if people had not engaged in the manipulation of a natural process. Sericulture, the breeding of silkworms to produce silk, has improved greatly over the centuries. The technologies used in making silk thread and weaving silk fabric have also benefited from important innovations.

A Better Silkworm

The silkworm is the larva, or caterpillar, of *Bombyx mori*, the domesticated silk moth typically used in silk production. (The name *Bombyx mori* means “mulberry silk moth.”) This animal’s life cycle has four stages: egg; larva that makes the cocoon; pupa that changes inside the cocoon; and winged adult moth. Silk is the material that the larva naturally produces to make its cocoon.

*Bombyx mori* is a hybrid, the result of breeding particular species over many years. This selective modification of Inherited traits was done to make a stronger and more productive moth. For example, a *Bombyx mori* moth lays about 500 eggs, more than other species. The eggs are hardier than other silkworm eggs. As a result, more of them survive to develop into larvae. The larvae are also healthy. They eat enough to increase 10,000 times in size in just four to six weeks.

Most moths fly during their adult stage to find mates and places with plentiful food to lay their eggs. But *Bombyx mori* is a mutated species of moth that is unable to fly. For this reason, it relies entirely on humans to provide its larvae with a special diet of nutrients from the leaves of white mulberry trees. Humans must also ensure that the eggs are kept at a temperature of 65° to 77°F until they hatch.

People go through this great effort because the silk of *Bombyx mori* is strong and breaks less often than “wild” silk. The filament from I a single cocoon can be 3,000 feet long when it is unwound. *Bombyx mori* silk is whiter than wild silk, so it 1 can absorb more dye. The filament is also round and smooth, resulting in a finer, more luminous cloth.

From Cocoon to Thread

For thousands of years, raising silkworms to make silk was an important part of Chinese culture. Women and girls were responsible for tending the worms, processing the cocoons, spinning the thread, and weaving fabric by hand. These painstaking chores produced beautiful results. They were also inefficient, consuming many hours per day and producing only a small amount of silk cloth.

Much of the ancient process survives in current practices. Cocoons are still harvested about eight or nine days after they form. They are placed in water so that they soften enough to be unwound without breaking the filament of raw silk. To avoid building up a surplus of unusable cocoons, a time-saving technique called *reeling* has been developed to unwind several cocoons at once. The cocoons are gently brushed to find the loose ends. Then the filaments are wound onto a reel.

A single raw silk filament is too thin to use for weaving. So the next common step in the process, called *throwing*, involves twisting several filaments together to form a thread. The thrown threads are then wound onto small spools called bobbins.

Advances in Silk Technology

Silk moth eggs and the closely guarded secret of sericulture had to be smuggled out of China before other countries could make silk. Once the basic process was known, people sought to improve the technologies used in making silk filaments into cloth. One important invention was the French reeling machine. Its great innovation was to speed up the reeling process and reduce waste.

About 1800, the invention of the Jacquard loom enabled silk weavers to create complex designs quickly. This mechanized loom required strong threads, so even better sericulture practices were developed. More recently, industrial weaving machines began using air to push the thread rapidly back and forth. This meant that fewer workers were needed to oversee the looms and that costs could be lowered. As a result, fine silk products were soon available at prices that more people could afford.

Today, China remains the leading producer of silk. But the demand for fine mulberry silk products reaches far beyond China’s borders. For this reason, people will continue seeking better, more economical ways to produce silk.

Make Connections

Talk about the role humans play in silk production. How have innovations over time benefitted people? ESSENTIAL QUESTION

What other technology have you learned about that developed through innovation overtime? How has this helped you? TEXT TO SELF

**TOEFL Junior:**

available

avoid

breeding (breed)

consuming (consume)

continue (continual)

domesticated (domestic)

during (duration)

expensive (expense)

provide

tending(tend)

twisting(twist)

weavers(weave)

**TOEFL:**

adult

available

absorb

advances (advance)

afford

avoid

breeding (breed)

chores (chore)

complex

consuming (consume)

current

diet

domesticated (domestic)

dye

economical (economic)

inefficient (efficient)

enabled (enable)

forth

hatch

hybrid

industrial

innovations (innovation)

traits (trait)

typically (typical)

loose

luminous

modification

means

painstaking

process

reduce

selective(select)

surplus

survive

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 4

Light Detectives

Astronomers use a number of technologies to analyze the light that we see reflected off the most distant objects in our solar system. These scientists often serve as “light detectives” who collect celestial clues using a variety of precision tools.

**Discovering Pluto**

In the 1920s, astronomers noticed something strange. The outer planets seemed to be affected by an unexplained force. Was there another planet out there with gravitational pull strong enough to tug on Uranus and Neptune? To find this object, a young scientist named Clyde Tombaugh perfected an innovative method for searching the sky.

Using a new telescope at the Lowell Observatory in Arizona, Tombaugh took wide-angle photographs of slivers of the night sky. He then viewed these images in a machine called a blink comparator. This tool was a type of microscope that superimposed two images of the exact same area taken at different times, placing one on top of the other. It blinked so rapidly back and forth between the two images that Tombaugh could see whether any objects changed position from the first time period to the next. As the months passed, Tombaugh estimated he had scanned more than a million stars. His painstaking research finally paid off in February of 1930 when he discovered Pluto and its orbital movement.

**Scanning the Kuiper Belt**

After Tombaugh’s discovery, astronomers became more interested in the outer reaches of our solar system. In 1992, they identified a disk-like region extending up to 9.3 billion miles from the sun and named it the Kuiper Belt, after Gerard Kuiper who had theorized the existence of such a region. Estimates suggested that there were about 70,000 large, icy objects in the Kuiper Belt. Were some even larger than Pluto?

To answer this question, astronomer Michael Brown and his followed a procedure similar to the method designed by Tombaugh. But they took advantage of new technology to make their search easier and more effective. Like Tombaugh, Brown’s team takes repeated images I using a telescope. Every three hours, a digital camera mounted on the Samuel Oschin Telescope at the Palomar Observatory in California snaps a picture of the night it sky. A microwave link allows robots to control both the telescope and its camera. These robots follow a pre-programmed routine that moves the telescope and takes pictures. This automated system drones through the night while the astronomers sleep.

**Oschin Telescope Palomar Observatory**

Instead of using a blink comparator, Brown’s team sends the images to a bank of ten computers at the California Institute of Technology (CIT). The computers superimpose images taken at different times and identify objects that are possibly moving. Then the team analyzes the data to try to verify the movement Most of the time, the objects identified are not breathtaking discoveries. They are simply the result of flaws in the telescope's camera. But sometimes, the computers do track down moving objects. Airplanes, satellites, and asteroids have been flagged by the system. And in 2003, the team discovered a bright shape that was moving more slowly than anything documented in our solar system. Could this be the object tugging on Uranus and Neptune?

**Combining New Data with Old**

The super-slow speed of this object, which was eventually named Eris, posed a problem. Brown calculated that Eris takes 560 years to orbit the sun. So it would take many years to collect enough data confirming the deduction that Eris affects planetary orbits. Rather than waiting, Brown decided to check photos taken by other astronomers. Luckily, Eris appeared in photographs taken as early as 1950. By combining these images with contemporary data, the team developed a more complete view of Eris’s size and movements.

The team originally estimated that Eris was 25 to 40 percent more massive than Pluto. But when they used pictures taken by the Hubble Space Telescope to confirm this hypothesis, they found out they were wrong. Eris is only slightly larger than Pluto. The overestimate was the result of Eris’s extremely reflective surface. The bright, reflected light gives the impression that Eris is mote substantial than it really is. Brown suggests that an atmosphere of frozen nitrogen causes Eris’s high level of reflection.

As a result of Brown’s discovery, astronomers reconsidered the definition of a planet. Ultimately, both Pluto and Eris were classified as “dwarf planets,” rather than planets. But discoveries in the Kuiper Belt continue to sustain great interest. Conservatively, astronomers predict that new technology will allow them to identify several. more dwarf planets in the Kuiper Belt. The information gained from their investigations will enrich our understanding of distant objects in other parts of the galaxy as well.

Make Connections

Talk about the technology that astronomers have used to investigate distant objects in our solar system. ESSENTIAL QUESTION

Describe a time when using a tool (a ruler, calculator, camera, etc.) to test a hypothesis helped you answer a question. TEXT TO SELF

**TOEFL Junior:**

automated (automatic)

clues (clue)

comparator (comparable)

complete

conservatively (conservative)

continue (continual)

enrich

estimated/ estimates/ overestimate (estimate)

high (height)

identified (identify)

massive

number

repeated(repeat)

scanned/scanning (scan)

snaps (snap)

solar

temporary

ultimately(ultimate)

**TOEFL:**

affected (affect)

analyzes (analyze)

automated (automate)

angle

astronomers(astronomy)

atmosphere

blink

calculated (calculate)

celestial

confirming (confirm)

conservatively (conservative)

detective (detect)

effective (effect)

enrich

estimated (estimate)

existence (exist)

extending(extension)

flaws(flaw)

forth

galaxy

hypothesis

identified(identify)

institute

tug

ultimately (ultimate)

massive

orbits/ orbital (orbit)

originally

painstaking

perfected (perfect)

planets (planet)

posed (pose)

reflection

routine

scanned/scanning (scan)

slightly (slight)

snaps (snap)

substantial

sustain

theorized(theory/ theoretical)

variety(vary/ various)

verify

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 5 Week 5

Tools of the Explorer’s Trade

Tools of the Explorer’s Trade

The word *technology* sounds modem, but people have been using it for at least 300 years. Considering that one definition of *technology* is “the use of knowledge for practical purposes,” we can say people have been developing new technologies since the dawn of human history. Some of them are antiquated. Others, though old, are continually improved. Stone Age axes qualify as technology, as do the wheel and the telephone. The following survey of several historical navigation techniques is one example of how technologies evolve over time.

The North Star

Sailors of early civilizations used the star Polaris, also called the North Star, to get their bearings at sea. But using the North Star for navigation had some serious drawbacks. First, it can. only be seen on clear nights, so attempting to navigate through unknown waters on a cloudy night could be catastrophic. Second, Polaris can be seen only from the Northern Hemisphere. While navigating with the North Star was a good choice under certain circumstances, something better was needed.

The Astrolabe

The astrolabe was an advanced measuring tool invented in the Middle East. Though its primary application was to make computations about time and the positions of the Sun, Moon, planets, and stars, it was also employed as a technological aid to navigation. The astrolabe gave mariners a way to determine the latitude of their ships while at sea.

The Sextant

The sextant is another tool that used the positions of the Sun and stars to find a location on Earth. First developed in Asia Minor in the late tenth century, it was used to measure the angle between a celestial object and the horizon. When navigators considered the measurement in relation to the time of day or night it was taken, they could find their ship’s location on a nautical chart Far from obsolete, this technology is still used today as a backup to modem navigation technologies.

The Compass

A compass is made by balancing a magnetic needle above a circular dial. Earths own strong magnetic field causes the needle to swing into a north-south position. Because a compass indicates direction in all weather and at all times of the day or night, its importance as a navigational technology was quickly recognized. Historians are unsure who invented the compass, but we do know it was in use in China as early as the eleventh century.

An Opinion: Let’s Keep Looking Beyond

Many characterize the ongoing story of human exploration as one of courage and creative resourcefulness. For most of history, exploration was confined to Earth’s surface. But in 1930, we began diving into the ocean’s depths. By 1969, we had landed on the moon. The probes that we deployed into deep space in 1977 are still transmitting valuable data back to us across billions of miles. Subsequently, we have sent robotic vehicles to survey the surface of Mars. And we have a powerful telescope in orbit that is sending us spectacular photographs of the formation of distant stars.

Exploring the unknown has clearly fueled our inventiveness, but it also inspires our imaginations. Because we are constantly elevating our aspirations, we have been able to increase our knowledge even when expectations have been the worst. Modern technologies are providing more and better tools to explore increasingly remote places. In fact, when it comes to exploration, the best is certainly yet to come. We should always resist the idea that an adventurous instinct might be foolhardy, and we should continue to value and encourage curiosity.

When the U.S. government grants patents to “promote the Progress of Science and useful Arts,” it gives exclusive rights to inventors for a set period of time. The numbers of patents issued in the years from 1850 to 2010 reveals a stunning increase in the rate of technological innovations.

Make Connections

Talk about the ways in which technologies used for exploration have developed over time. ESSENTIAL QUESTION

Tell you a technological tool you use in your daily life helps you learn about your community and the world. TEXT TO SELF

**TOEFL Junior:**

application (applicable)

constantly (constant)

continually/ continue (continual)

diving (dive)

exclusive

grants (grant)

issued (issue)

knowledge

navigate

navigational (navigation)

number

primary

remote

rendering(render)

resist

subsequently (subsequent)

value

valuable

survey

**TOEFL:**

aid

chart

civilization (civil)

community

advanced (advance)

application (apply)

celestial

characterize (character)

circular

confined (confine)

constantly (constant)

continually

curiosity

drawbacks (drawback)

evolve

exclusive

explorer(explore)

foolhardy(hardy)

imaginations(imaginary)

indicates (indicate)

innovations (innovation)

issued (issue)

latitude

navigational (navigation)

navigating (navigate)

obsolete

orbit

planets (planet)

primary

probes (probe)

promote

remote

rendering(render)

resist

spectacular

stunning (stun)

subsequently (subsequent)

weathered (weather)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 1

The Fortunes of Fragrance

Our sense of smell plays a significant role in our survival. It helps us detect poisons, smoke from a fire, toxic gases, and other dangers. Our noses can tell us a great deal about something that is unfamiliar or questionable. For example, a piece of rotten fruit may look beautiful, but its smell lets us know it is not edible. For centuries, doctors have used their sense of smell to identify infection or disease. Fortunately, there are many pleasant odors as well. From earliest times, people have sought ways to preserve the lovely scents of flowers and herbs.

Capturing Aromas

Many plants contain volatile oils. These chemicals often repel insects, but they smell good to us. Early humans discovered them while crushing or bruising leaves, fruits, and bark. Before long, people found ways to release and use the oils. They noticed that soaking rose petals in water resulted in a scented liquid. They also learned that simply burning parts of aromatic plants would scent the air. People soon started to mix powdered resin, or tree sap, with honey to form lumps of incense. They placed the incense on hot coals or in ornate burners to produce a perfumed smoke. In fact, the word perfume comes from the Latin words per and *fumum*, meaning “through smoke”

Over time, people developed other means to capture fragrance from plants. They squeezed the rinds of citrus fruits or boiled the leaves of such plants as lavender and peppermint to obtain their oils. Later, they found that steam could extract oils from both fresh and dried plants. After the steam releases volatile oils from plant material inside a pressurized chamber, it passes through cooling tubes where the oils become a separate liquid. This technique of steam distillation is still widely used today.

The petals of certain flowers cannot stand up to the heat of steam distillation, so people learned to press them gently into animal fat, which absorbs their fragrance. The fat is then washed in alcohol to draw out the fragrance molecules. After the alcohol evaporates, only the flower's fragrance remains as something called a concrete. This process, known as *enfleurage*, is both time-consuming and expensive. Today, solvent chemicals such as hexane are used to extract fragrance from delicate flowers.

Trading in Aromatics

Most fragrant plants are quite portable, so their distribution through vigorous trade was widespread throughout the ancient world. Depending on its availability, a treasured aromatic resource was often a more valuable commodity than gold or silver. Along Silk Road trade routes, Chinese merchants offered camphor for sale and purchased cinnamon and sandalwood from India. Egypt imported large quantities of myrrh. Caravans carried frankincense hundreds of miles by camel from Arabia to buyers in Greece and Rome. Eventually, Romans used so much incense that cargo ships were sent across the Mediterranean to speed up the way that supplies were replenished.

Trade in aromatics increased during the Middle Ages after people in Europe were introduced to the perfumes and spices of the Far East. But Europeans could buy these items only through merchants in the Middle East. Traders from that region had become the dominant players in the market and often charged extremely high prices. This monopoly on aromatic goods seemed impenetrable. So European explorers sought trade routes that went around the Middle East by sea.

The Enduring Power of Perfume

In the modern world, trade involving fragrance materials is as brisk as ever. But chemists are the new explorers. Over several decades, these scientists have learned to isolate the fragrant molecules in natural plant oils and engineer synthetic replacements for others. Synthetic fragrance chemicals are derived primarily from petroleum. They are usually less expensive than natural materials, because supplies are not affected by weather conditions or crop yields.

Still, many of the highest quality perfumes require a small percentage of ingredients derived from real flowers. One perfume company maintains its own fields in the south of France to grow the special kinds of rose and jasmine needed to produce their best-selling product. Many companies use a process called gas *chromatography* to identify the molecules that make up a natural flower’s fragrance. The molecules are then manufactured and blended to make a fragrance that simulates the real thing.

Demand for aromatics has only increased since ancient times. The production and sale of fragrance products make up an industry that is now worth billions of dollars. History has shown that, as long as people seek beautiful aromas, the fragrance market will continue to be big business.

Make Connections

Talk about the developments in technology and trade that resulted from people’s demand for fragrance. ESSENTIAL QUESTION

Describe the scent of a household product you use regularly. What do you like or dislike about it? TEXT TO SELF

**TOEFL Junior:**

availability (available)

capturing (capture)

cargo

consuming (consume)

continue (continual)

decades (decade)

derived (derive)

during (duration)

expensive (expense)

high/ highest (height)

household

identify

significant (insignificant)

isolate

merchant

primarily (primary)

significant

valuable

**TOEFL:**

affected (affect)

availability (available)

commodity

absorbs (absorb)

aromas/aromatic(aroma)

blended (blend)

brisk

concrete

consuming (consume)

copper

crushing (crush)

deal

delicate

detect

distillation (distill)

edible

evaporates (evaporate)

explorer (explore)

unfamiliar (familiarize)

fortunes (fortune)

fragrant (fragrance)

identify

incense

infection (infect)

isolate

liquid

maintains (maintain)

manufactured (manufacture)

molecules (molecule)

obtain

odors (odor)

portable

preserve

process

purchased (purchase)

repel

replenished (replenish)

rotten

insignificant (significant)

simulates (simulate)

squeezed (squeeze)

synthetic

vigorous(vigor)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 2

The Great Fire of London

**London in 1666**

London was by far the most populous city in England in 1666. And it was growing fast. Nearly 500,000 people crowded into its wooden buildings, some of which were hundreds of years old. The top floors of many houses overhung the narrow streets. Most had roofs waterproofed with tar pitch. Storerooms were brimming with flammable goods, such as oil and tallow for producing soap and candles. Open-hearth fires burned day and night for cooking, making pottery and metal goods, and providing heat.

Accidental fires were common. Some people feared that fire would someday destroy London. “Forewarned is forearmed,” they said, hoping the government would take action to improve safety. Many Londoners, however, were more worried about the plague, a dreadful sickness that had killed nearly 68,000 people during the previous two years. But the summer of 1666 had been unusually hot and dry, so a single spark was all that was needed to cause disaster.

A seventeenth-century painting depicts the Great Fire of London, 1666

**Fire Erupts**

The spark occurred early on Sunday morning, September 2. Officially, the fire was presumed to have started in the King’s bakery on Pudding Street. The baker later claimed that he had checked every room before going to bed at midnight and had diligently “raked up in embers” a fire he found in one fireplace.

Samuel Pepys, a Royal Navy administrator living in London, recorded his observations of the fire in a diary. He wrote that the baker’s family had woken up choking on smoke rising from downstairs. He noted they were “in absolute ignorance how this fire should come.” A strong wind then fanned the flames, sending sparks from the bakery to ignite other buildings. Fire quickly spread to surrounding streets.

In the 1600s, London had no fire department. People began throwing water on the fire from leather buckets and beat it with brooms, but these efforts were a case of “too little too late. The flames soon reached the banks of the River Thames, burning warehouses and half of London Bridge. Pepys went to the river and “there saw a lamentable fire.” He described people flinging goods into the water and leaping into boats to try to escape the flames. Others pulled heavily laden carts with great urgency to save the few belongings they could.

**London Is Burning**

Pepys alerted King Charles II, who sent him to the Lord Mayor with the command to pull down houses to create a firebreak. The greatly agitated mayor told Pepys he had already directed men to do just what the king ordered, but their efforts had been futile. He said the fire “overtakes us faster than we can do it.” Wind spread the fire across firebreaks as wide as 20 houses. Sparks even ignited the rubble from tom-down houses, so flames were soon sent in new directions. Panic enveloped the city.

John Evelyn, a well-known writer who also kept a diary about the fire, described fighting the flames on Fetter Lane. The ground under his feet was so hot, he noted, that it “even burnt the soles of my shoes.” When the fire reached St. Paul’s Cathedral, Evelyn documented how the heat melted the lead roof, causing molten metal to “run down the streets in a stream” and stones from the walls to explode outward.

The incessant fire raged undiminished for four days. The *London Gazette* reported that “all attempts for quenching it however industriously pursued seemed insufficient.” Finally, crucial relief came when the fire reached a brick wall near a law school and the winds changed direction. But by that time, four-fifths of the city had become a smoldering ruin. In all, 13,200 houses, 87 churches, and many government buildings were destroyed. Although few deaths were recorded, thousands were homeless.

**The City Rebuilds**

After the fire, people wanted someone to blame. A French watchmaker named Robert Hubert became a scapegoat when he said he had set the fire. Few people believed Hubert’s confession. The Earl of Clarendon called him a “poor distracted wretch. Still, he was hanged. By 1667, Parliament had formally declared the fire an accident, as “nothing hath yet been found to argue it to have been other than... a great wind, and the season so very dry.”

Where there is life there is hope, and people began to rebuild while living in nearby fields. For safety, many new buildings were constructed of stone rather than wood. The need for businesses to recover quickly even took priority over King Charles’s plans for a new city design. People could also count their blessings that the fire had destroyed the city’s rats and their plague- infected fleas. The plagued devastation was finally halted.

Make Connections

Talk about the ways in which personal and official records help us understand what happened during London’s Great Fire. ESSENTIAL QUESTION

Describe an event that you and others witnessed. Tell what each of your accounts added to the overall understanding of what happened. TEXT TO SELF

**TOEFL Junior:**

count

during (duration)

explode

priority(prior)

pursue

witnessed (witness)

**TOEFL:**

absolute

accidental (accident)

administrators (administrator)

agitated (agitate)

alerted (alert)

blame

blessings (blessing)

brimming (brim)

cathedral

checked (check)

confession (confess)

constructed (construct)

crucial

depicts (depict)

diligently (diligent)

undiminished (diminish)

directed (direct)

distracted (distract)

enveloped (envelop)

erupts (erupt)

explode

witnessed(eyewitness)

formally(formal)

futile

gazed (gaze)

halted (halt)

ignite

ignorance

incessant

industriously (industrious)

infected (infect)

lamentable (lament)

observations (observation)

panic

plagued (plague)

presumed (presume)

previous

spray

insufficient (sufficient)

urgency(urge)

witnessed (witness)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 3

Researcher to the Rescue

**Manatee Airlift**

On a sunny December day, Dr. Antonio Mignucci is in Florida to keep careful watch as a dozen crew members lift an 840-pound manatee into the cargo hold of a National Guard plane. The scene is certainly unusual, but Dr. Mignucci has learned that saving marine mammals requires uncommon partnerships. Today’s team of scientists and military personnel don’t mind that their clothes are saturated with seawater. They know their unique collaboration is helping to save a life.

**Transporting a manatee for treatment.**

On the aircraft, everyone calls the massive six-year-old manatee “UPC” because the wounds he received when struck by a boat resemble the bar codes on store items. When they reach the Puerto Rico Manatee Conservation Center, Dr. Mignucci renames UPC Guacara, after the river where the animal was stranded. But Guacara will get more than an alternative name. He will also take on the role of surrogate parent to younger manatees recovering at the Center.

Unlike some marine mammals, manatees cannot stay submerged for long periods of time. They lack the special protein called myoglobin that enables whales and dolphins to hold oxygen in their muscles. So manatees live in shallow water, where they eat up to 10 percent of their body weight in sea grass and other underwater foliage each day. But today these coastal waters are crowded with boats that can injure and even kill the slow-moving creatures.

Manatees are naturally resilient, but they sometimes need help to recover from injuries. As a marine biologist, Dr. Mignucci recognizes when it's time to extract manatees from tough situations. For example, he knows that Guacara’s injuries make him “negatively buoyant.” In other words, Guacara sinks in deep water. But he can swim safely in shallow pools at the Center. There he lives a healthy life while helping to care for the younger manatees.

**Joining Forces**

Manatees are just one focus of Dr. Mignucci’s work. He investigates a wide variety of marine animals. No matter what he’s studying, however, he considers collaboration to be an essential part of effective research. Working with the Seal Conservation Society of the United Kingdom, Dr. Mignucci coordinated an investigation to test the hypothesis that the Caribbean monk seal is extinct. This seal once lived in the Gulf of Mexico and the Caribbean Sea. Several unconfirmed sightings suggested that a few members of this species might still be alive. The combined research team helped to prove that those sightings almost certainly correspond with a different species, the hooded seal. Regretfully, they concluded that the Caribbean monk seal truly is extinct.

Partnerships also allow researchers to share information and expand the impact of their work. In 2010, the Manatee Conservation Center joined forces with the Georgia Aquarium in Atlanta, the worlds largest. These two centers now have regular dialogues and share their knowledge of animal care, veterinary procedures, and water-quality monitoring.

Collaboration has also helped Dr. Mignucci solve some unusual problems. It is important for veterinarians at the Center to get accurate internal temperature measurements, but manatees have large molars and chew on anything you put in their mouths. So oral thermometers don’t work. Dr. Mignucci sought help from a company that specializes in making animal tracking devices. The company donated microchips about the size of a grain of rice. Once a chip is implanted, it can be scanned with a pocket reader to obtain the manatee’s body temperature.

**Singing for Support**

Dr. Mignucci’s scientific adventures aren7t limited to the laboratory. He has published books for children and even ventured into the recording studio. To spread word about the plight of manatees, Dr. Mignucci turned to another unusual collaborator, musician Tony Croatto, who who was well known for his versions of Puerto Rican folk songs.

Croatto and Mignucci cowrote a song called “Moisés llegó del mar” (“Moses Came from the Sea”). Their song was inspired by the first manatee rescued by Dr. Mignucci. Moises (Spanish for Moses) was separated from his mother when he was just two weeks old. When Dr. Mignucci’s team found him, he had both external and internal injuries. After 27 months of care, they released a healthy Moisés back into the Caribbean. It was the first time a captive-raised manatee had been rehabilitated and released.

The song received plenty of airplay. Soon Moises was a familiar icon admired by listeners around the world. Today he lives in the wild, where the Center’s staff regularly monitor his progress. This was just one more way that Dr. Mignucci has brought people together to protect and care for marine life.

Make Connections

Talk about how Dr. Mignucci and his collaborators find creative solutions to the problems facing marine mammals. ESSENTIAL QUESTION

Describe how you could collaborate with others to find out more about a local species that needs help. TEXT TO SELF

**TOEFL Junior:**

captive (capture)

cargo

codes (code)

conservation

devices (device)

essential

expand

internal

external

focus

knowledge

massive

personnel

scanned (scan)

submerged(submerge)

treatment(treat)

unique

**TOEFL:**

accurate

alternative

code

admired (admire)

collaborate

concluded (conclude)

unconfirmed (confirm/ confirmed)

conservation

coordinated (coordinate)

crew

dolphins (dolphin)

donated (donate)

effective (effect)

enables (enable)

expand(expansive)

external

extinct

familiar(familiarize)

hypothesis

impact

internal (external)

treatment (treat)

unique

kingdom

mammals (mammal)

marine

massive

monitoring (monitor)

obtain

oxygen

personnel

plight

protein

rehabilitated (rehabilitate)

rescued (rescue)

resemble

scanned (scan)

staff

submerged (submerge)

thermometers(thermometer)

variety(vary/ various)

ventured(venture)

versions(version)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 4

Messages in Stone and Wood

**“We Were Here”**

Deep in a forest in what is now Pennsylvania, members of a hunting party were preparing to embark on their trip home. Only one task remained: creating a chronicle of their successful hunt. One of the hunters selected a broad oak tree, carefully made some cuts with his knife, and used the blade to peel back the bark. From a small leather bag, he shook out some powder he had ground from red pebbles. Then he mixed the powder with animal fat to make a thick red paint.

On the tree, the hunter meticulously painted images of a turtle and six men carrying packs and bows. Next, he drew a circle, a half circle, and six marks. Finally, he added the heads of three deer and a bear. From then on, anyone passing this spot would see from these designs that six men of the terrapin clan had hunted here. They had camped for one and a half moons, plus six days. And they had had a successful hunt.

**Mysterious Markings**

The first Europeans to explore North America came across many markings like the ones on that Pennsylvania tree. At first, no one understood the meanings of these mysterious *petroglyphs* (stone carvings) and *dendroglyphs* (tree carvings and paintings). Nor did they know who had created them. As time went on, however, people studying the markings, or *pictographs*, began to understand that they had been made by Native Americans. They concluded that the pictographs were records of hunts, battles, and dan meetings. They seemed also to serve as directions, warnings, boundary markers, and clan identifications.

When non-native people pushed farther west during the 1800s, they discovered many more of these images. In the dry desert of the Southwest, exquisite pictographs on rocks and cave walls appeared to be freshly made. This was especially true of carvings protected from direct sunlight. In the East, however, moisture decomposes dead tree trunks and winter ice damages rocks. Pictographs generally survive this wetter and colder climate only in sheltered spots. These spots are often outcroppings of bedrock that have been covered over by soil or moss. As a result, the only remaining records of many vanished pictographs are copies that were sketched by early explorers and historians.

**Reading the Messages**

For a long time, archaeologists made little progress in studying the rock art of Native Americans. They could not reliably date the pictographs, relate them to other human artifacts, or even agree on their meanings. But as technology improved, scientists learned much more about these intriguing images. For example, they used radiocarbon dating to measure the decay rate of carbon in the paint of dendroglyphs. By analyzing how rock surfaces had weathered, they estimated that some petroglyphs were nearly a thousand years old.

Although dating is now more reliable, understanding the meanings of rock images remains difficult. It is generally accepted that the people who made pictographs in open areas wanted to mark borders or record significant events. But interpreting images hidden in sheltered areas or caves has been more challenging.

Archaeologist Rex Weeks, an Echota Cherokee from Alabama, has brought an intrinsic cultural perspective to the scientific study and interpretation of Native American rock images. Dr. Weeks suggests that petroglyphs in secluded locations were purposely made at sites that would not be accessible to outsiders. The images were intended primarily for ceremonial use. Elders may also have used them to teach young people the beliefs and history of their clan. Weeks’s research has shown that many of the symbols employed in pictographs link the cultures of ancient peoples to existing oral traditions of Native Americans. And by conducting experiments with hammer and chisel stones, Weeks has been able to demonstrate his theories about the techniques used to create rock carvings.

**Preserving the Past**

Today, many pictographs are in danger of being destroyed by natural forces before they can be documented and studied. Others are damaged when careless excavation by non-professionals defaces them or leaves them exposed to the elements. So experts have developed a system called the Rock Art Stability Index to assess in a methodical way which sites are most at risk. They also enlist trained volunteers, including native people, to record and manage newly discovered sites. One such site, a cave in the Appalachian mountains, contains fragile rock art that is more than a thousand years old. Educating the public about the importance and vulnerability of these sites is critical if the efforts of archaeologists such as Dr. Weeks are to succeed in preserving these rich cultural resources for future generations.

Make Connections

Talk about what archaeologists have learned from studying the pictographs of early Native Americans. ESSENTIAL QUESTION

Compare pictographs to the methods you use today to deliver messages and record events in your life. TEXT TO SELF

**TOEFL Junior:**

broad (breadth)

ceremonial (ceremony)

during (duration)

estimated (estimate)

generations (generation)

identifications (identification)

significant (insignificant)

interpreting (interpret)

interpretation

reliable(liable)

moisture(moist)

primarily (primary)

professional

conducting (semiconductor)

significant

spots (spot)

volunteers (volunteer)

**TOEFL:**

accessible (access)

analyzing (analyze)

boundary (bound)

bow

carbon

ceremonial (ceremony)

climate

concluded (conclude)

conducting (conduct)

critical

decay

demonstrate

elements (element)

enlist

estimated (estimate)

existing (exist)

explore

exquisite

fragile

identification(identify)

intrinsic

methodical

meticulously

moisture(moist)

mysterious

perspective

reliable

insignificant (significant)

sites (site)

sketched (sketch)

spots (spot)

stability (stable)

symbols (symbol)

theories(theory/ theoretical)

vanished(vanish)

volunteers (volunteer)

weathered (weather)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**

Unit 6 Week 5

“How Many Seconds?”

How many seconds in a minute?

Sixty, and no more in it.

How many minutes in an hour?

Sixty for sun and shower.

How many hours in a day?

Twenty-four for work and play.

How many days in a week?

Seven both to hear and speak.

How many weeks in a month?

Four, as the swift moon runn’th.

How many months in a year?

Twelve the almanack makes clear.

How many years in an age?

One hundred says the sage.

How many ages in time?

No one knows the rhyme.

----Christina Rossetti

An Ode to the Wind

Ode to the wild and whistling wind,

To its power,

To its pleasures,

To the sky that it clears

And the comfort that it brings,

Revealing a warm and radiant sun.

Ode to the wind’s uproar,

To its chaos and pandemonium

Unfettered by mountains and mammoth peaks,

Moving deserts and dust great distances,

Whipping snow into undisciplined drifts,

Lashing waves upon dark sand.

Driving flames through bush and bark,

Hissing and roaring like a dragon.

Ode to the wind’s energy and titanic strength,

Scattering seeds as valuable as gold upon the land,

Filling square-rigged sails with billowing force,

Thrusting ships toward new horizons,

Whipping windmills to turn and generate,

Dispersing autumn leaves to replenish the earth,

To the storms it brings upon us

And the life-giving rain.

Ode to the moving air,

To the warm air rising

And the cool air that comes in to take its place,

To the sky that it cleared

And the comfort it brought,

Rustling hair, cooling fevered brows.

Wind a thousand times softer than silk

Offering a sweet incentive for recreation,

Lifting kites to the outer edge of the stratosphere.

---Jonathan Moss

Make Connections

Talk about the way each poet expresses an understanding of how people may take time to relax. ESSENTIAL QUESTION

How might experiencing the sensations of a windy day help when you feel the need to take a break? TEXT TO SELF

**TOEFL Junior:**

chaos

drifts (drift)

driving (driver)

generate

thrusting(thrust)

valuable

**TOEFL:**

chaos

edge

unfettered(fetter)

incentive

titanic

uproar

lashing (lash)

peaks (peak)

radiant

recreation

replenish

scattering (scatter)

swift

thrusting(thrust)

**SSAT:**

**IELTS:**

**SAT:**

**ACT:**