

CONNECT 123

Your Family • Community • World

Farming and gardening

Who grows your food?

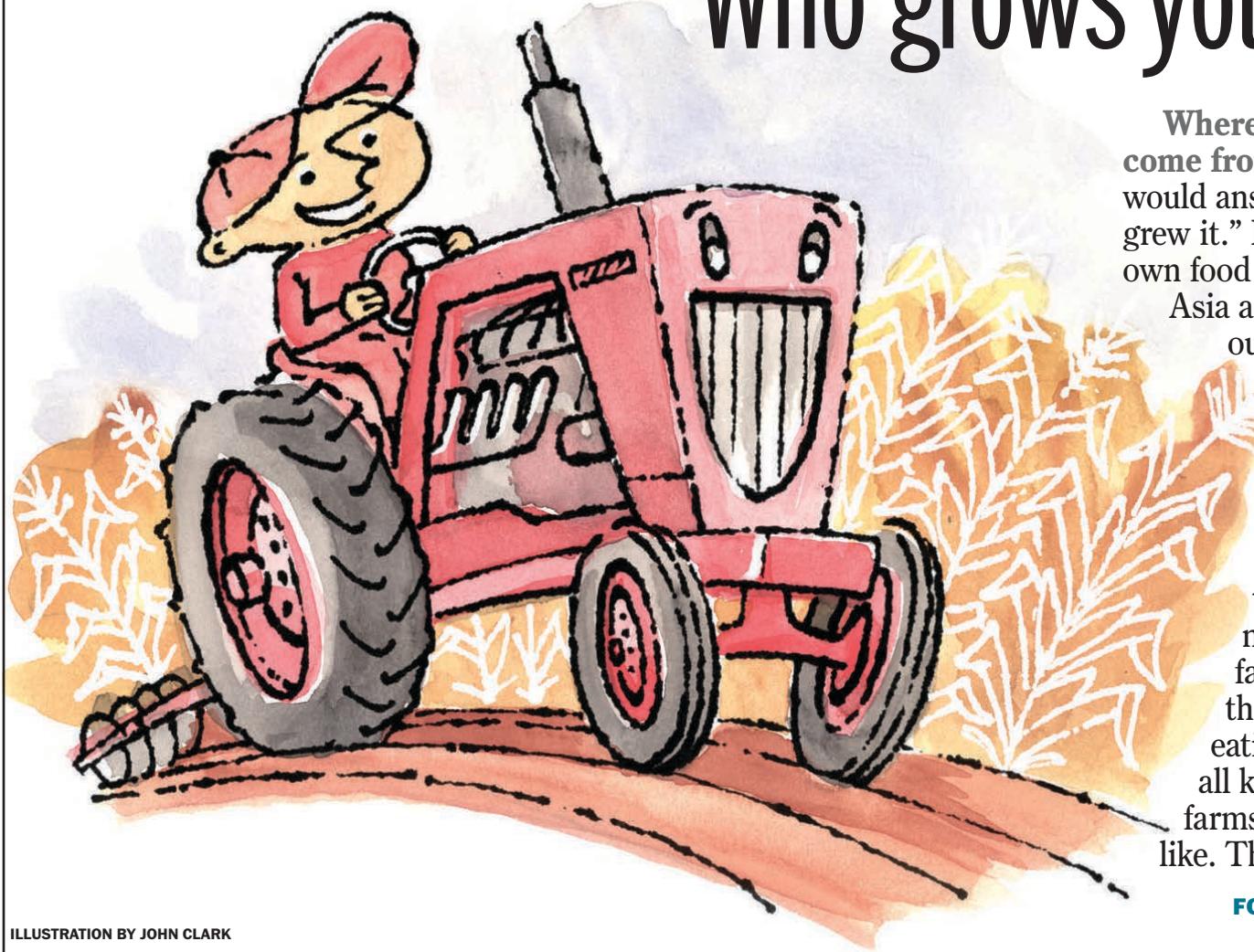


ILLUSTRATION BY JOHN CLARK

Where does your food come from? Long ago, you would answer that "my family grew it." People still grow their own food in countries in Africa, Asia and South America. In

our country, we most often buy it from the store. And the store buys it from many different places.

We may not know who grew the potatoes you had for dinner. But somewhere, a farmer will be growing the potatoes you'll be eating next fall. It takes all kinds of different farms to grow the food we like. The cherry

FOOD CONTINUED ON PAGE 2

Seeds

You know that a bank is a place to store valuable things. Seeds to grow grains and vegetables are worth even more than money. A seed bank is a place where we can keep seeds of all the different plants that we need for the future.

There are thousands of different kinds of corn and potatoes. Most of them are very rare, but we might need them years from now. A new seed bank will be built on the Norwegian island of Spitsbergen. Svalbard International Seed Vault will be inside a mountain in a deep tunnel where the ground stays frozen all the time. Scientists will be able to keep seeds of valuable plants from all over the world.

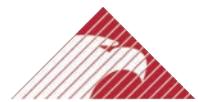
Composting

Every gardener knows the word compost. It means plant material that has slowly decayed and turned into dark earthy material. Gardeners use compost because it provides food for new plants, and it helps soil hold water better.

Composting is an important way to deal with trash and garbage. Some cities turn their waste into compost instead of just throwing everything in a big dump. Then they can use the compost on public parks or sell to farmers.



SHUTTERSTOCK



MOUNTAIN AMERICA
CREDIT UNION



Math: Common denominator for saving money

BY ALEX, AGE 11

Most kids think math isn't very useful in everyday life. With smartphones and computers in the palms of their hands, kids think they won't use math once they finish school.

But everyone is looking to save money. You can use math in your everyday life to save money, and there are lots of ways to do it.

Most people use math without knowing it, although some people don't use it as often as they should and miss many money-saving opportunities.

For example, when my parents and I were deciding on whether to buy a semester bus pass or a 10-ride card, we used math.

There are other ways to save money with math. Another example is to compare prices with different unit costs.

The most common way unit prices are important is when you're buying large quantities of things. It can get tricky to know which is better just by looking at it.

As my mother says, "I use math to see if buying bulk items at Costco is cheaper than in the grocery stores. I need to divide the price by the number of ounces or packets. Then I can do the same at a regular grocery store and I know which is the better option."

Using math also can help develop savings and spending plans. For example, if you want to buy a PlayStation 4, which costs roughly \$400, you can figure out how much allowance money to save per week or month.

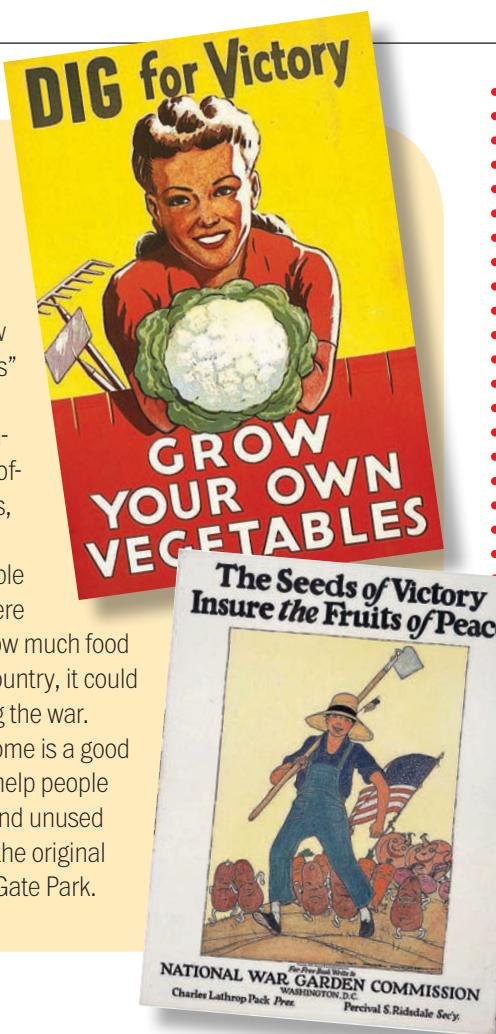
Doing the math helps you set realistic goals for saving.

Victory garden

We are used to having more food than we can eat. But in the 1940s people were asked to grow food. These patches were called "victory gardens" because people felt it was a way they could help win World War II. People planted fruit and vegetables in back yards and on apartment-building rooftops. Lawns in parks were plowed up for gardens, too.

The main idea of victory gardens was that people could grow a lot of food for themselves. There were 20 million gardens in 1943. You can imagine how much food that saved. Instead of hauling food across the country, it could go overseas to feed the men and women fighting the war.

Even today the idea of growing more food at home is a good one. A group in San Francisco wants the city to help people with gardens in yards, window boxes, rooftops and unused land. They also want the city to replant some of the original victory garden space in San Francisco's Golden Gate Park.



Community gardens

Not everyone has a big yard and room for their own garden. A community garden is a plot of land where many people share space to grow flowers, fruits and vegetables. In Europe, where many people live in apartments, community gardens are very common. In the United States, many cities sponsor garden areas for the public. Usually there is an organization that takes care of the land, provides the water and makes the rules.

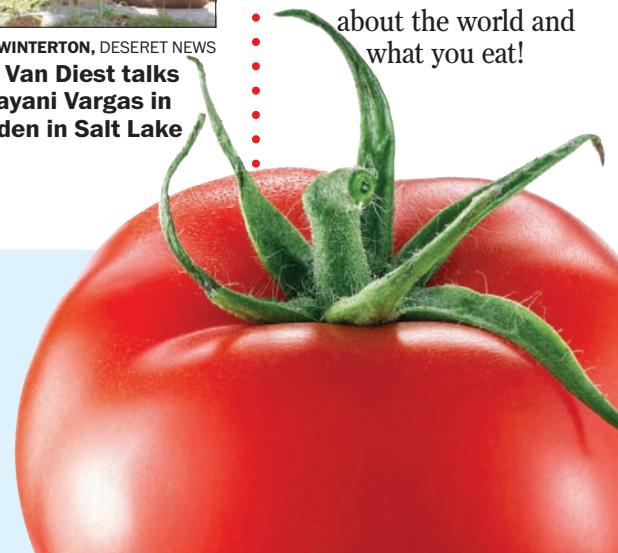


SCOTT G WINTERTON, DESERET NEWS
Youth educator Emma Kroon Van Diest talks with Felicia Schneider and Dayani Vargas in the Wasatch Community Garden in Salt Lake City.

Grown in Utah

Should we buy food that is grown closer to home? Many people say we should know where our food comes from. Food grown near us will be fresher and may taste better. It may save energy, too.

Visit a farmers market in your area this summer.



FOOD CONTINUED

and apple trees are just waking up from their long winter sleep. Even farther north, blueberry and cranberry plants are still under the snow. But in California, workers are clearing weeds from fields of strawberries. Wheat is sprouting up like grass in big fields in the Midwest.

While it is winter here, it is summer in Chile and New Zealand. Soon people there will be picking grapes and kiwi fruit. Some of it is sent on planes so we can have fresh fruit even in winter. Big ships bring us bananas from Central America and orange juice from Brazil. These ships have giant refrigerators or freezers.

Some grocery stores have signs to tell you where their fruits and vegetables come from. For many years, bananas have had little labels with the brand name. They also tell the country where the fruit was grown. Other kinds of fruit have little labels, too. Look for them and for signs and boxes to see where the food comes from.

Look for clues on where food really comes from. You'll learn more about the world and what you eat!

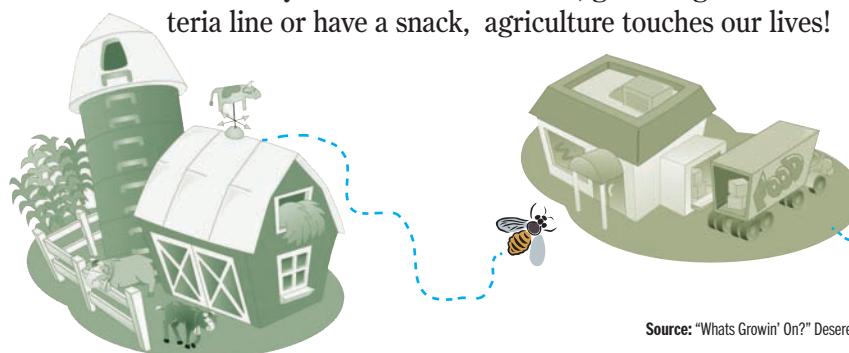
From farm to fork

NEARLY EVERYTHING YOU EAT comes from either a plant or an animal. Fruits, vegetables, nuts and grains all come from plants. Meat, fish, eggs and dairy foods are all animal products. All of these foods come from farms and ranches. Plants take nutrients out of the soil and air to make their own food. The substances they contain, including sugars, starches, vitamins and minerals, nourish us when we eat them.

Many different parts of a plant can be eaten. During an ordinary dinner, you might eat leaves, stems, roots, flowers, fruits and seeds! If you don't believe it, think about those leaves you had for dinner the other night (lettuce). In your salad, you might also have enjoyed some delicious stems (celery) and roots (carrots). If your meal included broccoli or cauliflower, you were actually eating flowers. You may have sprinkled your salad with seeds (sunflower seeds). And it's likely your salad also included some dairy, poultry and pork products (cheese, boiled eggs and ham or bacon).

Animal products provide other nutrients, such as protein, minerals and vitamins. Did you have baked chicken, grilled pork chops or roast beef with that salad? All of these are produced on farms and ranches and were brought to your dinner plate with the help of the 21 million people in America who are employed by the agriculture industry.

Each day when we eat our cereal, go through the cafeteria line or have a snack, agriculture touches our lives!



ILLUSTRATIONS BY YASUKO MITSUOKA

Source: "What's Growin' On?" Deseret News Newspapers in Education section, Oct. 21, 2003



NEWSPAPER ACTIVITIES

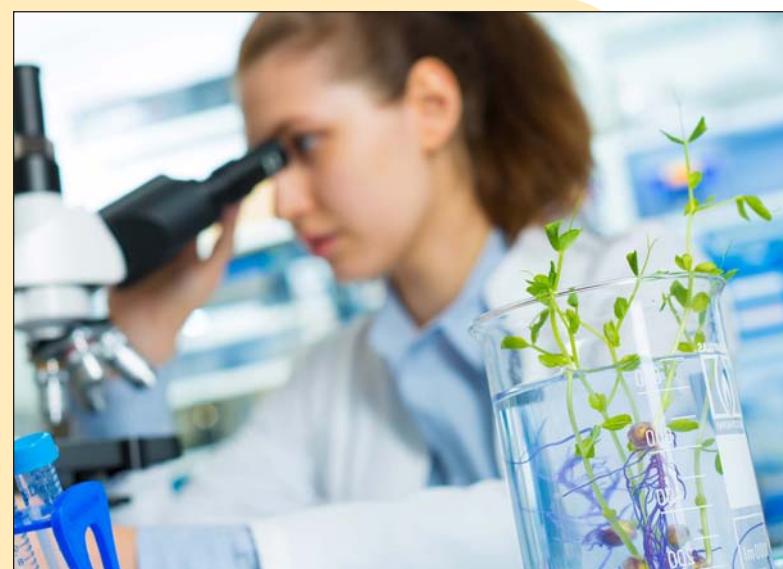


Careers in Agriculture

Look through the classified advertising section of the Deseret News to locate the help wanted columns. Find and circle in crayon all jobs you can see that are related to agriculture in some way. Put a large red star by the job you think you would be the most interested in and the best at doing. Tell why.

Find and Clip

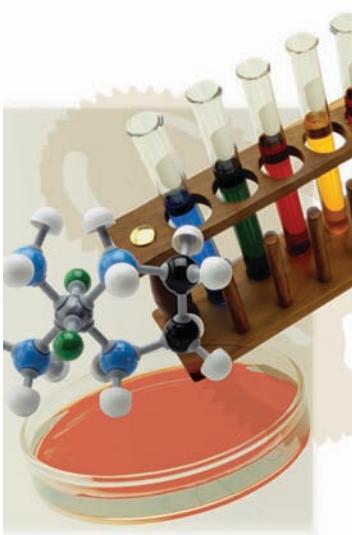
Search the Deseret News headlines for large letters to spell out the word AGRICULTURE. Clip out the letters and paste them down the side of a piece of construction paper. Next to each letter, write or draw words or pictures that begin with that letter. Remember that each thing you write or draw must have something to do with agriculture. Share your finished product with your classmates.



SHUTTERSTOCK

Looking for a Career?

How about helping to supply people with the things they use everyday? What careers meet our needs for life? Careers in agriculture. Careers that provide us with food, our clothes, shelter, and really everything that isn't mined, are a result of farmers and ranchers who work with a multitude of scientists, technicians, business people and educators. A lot of people get involved in getting our food from the farm to our fork. Everyone from the actual farmer to the research scientists who help develop new seeds, safer crop protection and more efficient machines is part of a large complex system that provides us with the things we use everyday. Opportunities have expanded in the field of agriculture to include unique positions in sustainable farm management systems, biotechnology, forestry, marketing, engineering and more. Today there are 365 fields of study and employment in agriculture. Take the time to explore some of the careers awaiting you. Visit wwwffa.org/careers and wwwagusu.edu for more information about agricultural careers.



A fruit for all seasons

Did you ever think about where all the different kinds of fruit come from? A hundred years ago people ate oranges shipped in railroad cars all over the United States. Today we eat fruit from around the world as well as our own country. When it is winter here we import fruit from the southern hemisphere where it is summer.



Some flowering fruit trees like the plum tree, above, display beautiful blossoms but bear inedible fruits.

See if you can match the different fruits with where they are commonly grown:

- | | |
|--------------|-------------|
| Pie cherries | Canada |
| Apples | Mexico |
| Bananas | Wisconsin |
| Kiwi fruit | California |
| Grapes | New Zealand |
| Blueberries | Utah |
| Avocados | Chile |
| Pomegranates | Ecuador |
| Pineapple | Philippines |
| Cranberries | Utah |

Word scramble

What does it take to grow a garden?

LISO _____

WRATE _____

THILG _____

NATLP _____

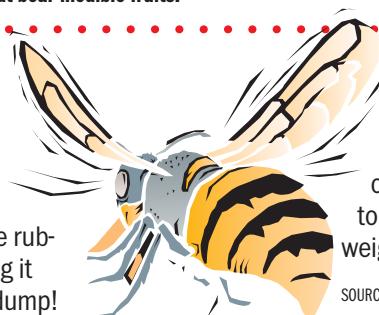
EDSES _____



Insect facts

ants

Ants are clean and tidy insects. Some worker ants are given the job of taking the rubbish from the nest and putting it outside in a special rubbish dump!



bees

A worker bee can visit between 50 and 100 flowers on a single trip. It will return to the hive carrying half its weight in pollen and nectar.

SOURCES: NOVA ONLINE, LINGOLEX.COM

Take the Pizza Pledge!

Take the Read Today Pizza Pledge and read with your family! Read 20 minutes everyday and mark your progress on the pizza to the right.

Once your pizza is fully "cooked" with reading, take this form to your local participating Papa Murphy's location to redeem it for a FREE FAVES pizza or 50% off any regular menu priced pizza.

Disclaimer: Offer valid 3/21/2016-4/17/2015. Limit one pizza per family. Only redeemable at participating Papa Murphy's locations. 50% off regular menu priced pizza discount excludes FAVES and dessert pizzas. For more information and a list of participating locations, visit readtoday.com

Child _____

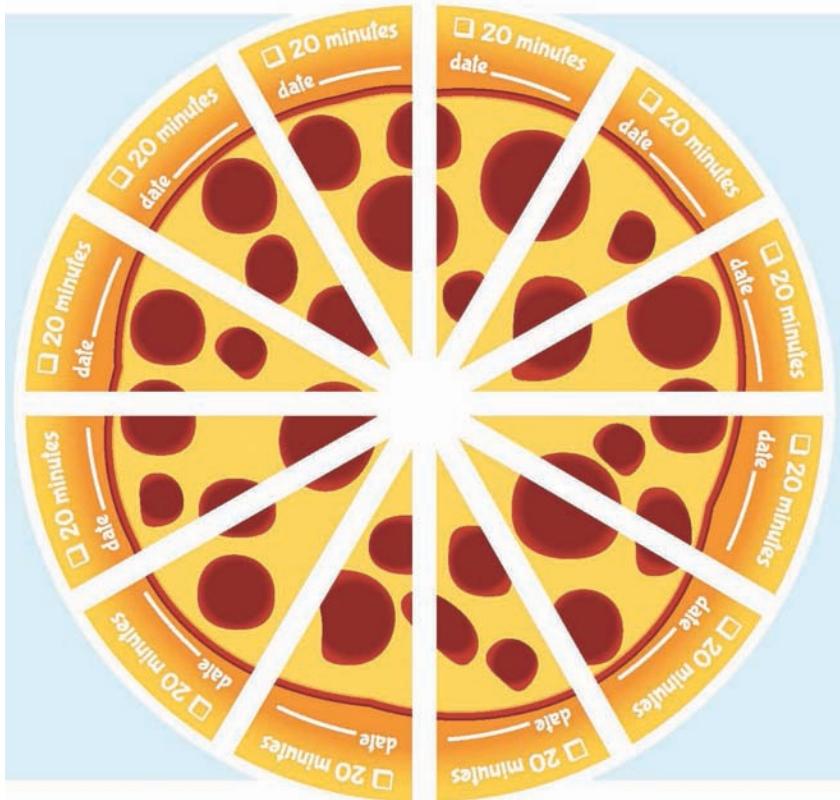
Parent _____

Child _____

School _____

Child _____

Teacher _____



DESERET NEWS

**CLASSROOM
Connections**

If you would like to receive FREE copies of Connect 1•2•3 for your classroom, order on the Web at deseretnews.com/nie.

Connect 1•2•3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1•2•3
NIE Deseret News
55 N. 300 West

Salt Lake City, UT 84101
801-237-2172

NIE director: Cindy Richards
Art director: Heather Tuttle

S P O N S O R E D B Y



WORD SCRAMBLE: Pie cherries - Utah, Apples - Utah, Bananas - Ecuador, Kiwi fruit - New Zealand, Grapes - Chile, Blueberries - Canada, Avocados - Mexico, Pomegranates - California, Pineapple - Philippines, Cranberries - Wisconsin

ANSWERS: Pie cherries - Utah, Apples - Utah, Bananas - Ecuador, Kiwi fruit - New Zealand, Grapes - Chile, Blueberries - Canada, Avocados - Mexico, Pomegranates - California, Pineapple - Philippines, Cranberries - Wisconsin



Who pays for college: parents or students?

There's only one rule when it comes to determining which college expenses parents pay for and which ones students pay for: It's whatever your family decides.

Sit down with your parents before you head out to college and have a discussion about money. Find out exactly what they are planning to cover and what your responsibility is.

Don't forget to ask specific questions, such as:

- Will you be able to provide for me financially while I'm in college? If so, how much and how often?
- Will you pay me an allowance or a stipend weekly, biweekly, or monthly?
- Do you expect me to work while enrolled in school? If so, where and for how many hours a week?

If parents and students decide that a part-time job is going to be a part of college finances, you should prepare now by creating a résumé so you'll be ready to apply for on- or off-campus jobs.

Conducting your financial prep rally isn't as much fun as homecoming, but it will make your life easier by limiting your debt after graduation and reducing stress while you're in school. Luckily, you aren't the only member of your team. Your parents, financial aid counselors, on-campus money management offices and financial institution can help you along the way.

With a little preparation, you'll call your folks more to chat than to request emergency cash.



WHAT'S UP WITH gravity

HOLD ON TIGHT!
 Have you ever ridden on a roller coaster? If so, you've experienced the "wild" side of gravity. There are no motors on a roller coaster; instead, it is driven by gravity and momentum. The ride begins with a fast drop down a steep stretch of track and continues as gravity pulls the cars along at speeds as fast as 70 mph.

Most of us learned at an early age that when a ball is thrown into the air it falls back down to the ground. (Unless, of course, it gets stuck on the neighbor's roof.) Most of us also learned that this phenomenon is caused by gravity — a powerful force that pulls things down to Earth. But gravity does more than make objects plummet to the ground. It affects everything you do, from holding a hat on your head to keeping you from flying off the face of the Earth as it travels around the sun at 66,000 miles per hour. It's gravity that makes Earth and the other planets orbit the sun in the first place.

Think about it. Almost everything that happens here — and beyond — is in some way connected to grav-

ity's pull. You might say this wondrous force keeps everything in order.

WHAT IS GRAVITY?
 People have been pondering that question for thousands of years. It's not that we don't understand what gravity does; it's that we're hard-pressed to explain how it works.

What we do know is that gravity is a force of attraction; a force that acts between all objects because of their mass. Since the Earth is a very large mass, its gravitational pull is the dominant force in our lives. All objects on or near Earth's surface are pulled toward its center.

We also know that gravity is one of the four basic forces that hold the

Gravity's Gurus

WATCH OUT BELOW!

The Leaning Tower of Pisa is known not only as the fabled site of Galileo's experiment. It is world-renowned because it, well, leans — 14½ feet out of line (when measured from the seventh floor). The tower doesn't fall over because its center of gravity is still within the base of the structure.



Some of the greatest minds of all time devoted their lives to studying the mysterious force of gravity. These renowned philosophers, astronomers and scientists made great strides in helping people understand how gravity holds the universe together.

The earliest theories were based on religious beliefs and suggested that the Earth was the center of the universe. All heavenly bodies, many believed, were held in orbit around our planet by an invisible force.

The Greek philosopher Aristotle, for instance, maintained that all heavenly bodies — planets, stars, moons — were encased in invisible spheres that ran through the sky. Those spheres, he said, kept them in their orbits around the Earth.

Curious about why objects that are thrown into the air fall to the ground, Aristotle also considered the concept of an Earth-based force. But like many others, he never connected it with the motions of the celestial bodies. He wrongly concluded that heavier objects fall faster than lighter ones. His views would go unquestioned for hundreds of years.

Copernicus, a Polish astronomer, was the first to propose that the Earth and other planets revolve around the sun. But he, too, failed to see a relationship between planetary movements and the force that pulls things downward to Earth.

THE LEGEND OF THE LEANING TOWER

Italian physicist Galileo added weight to the sun-centered, or heliocentric, train of thought after discovering in 1610 that the planet Jupiter had four moons that revolved around it. This discovery led him to conclude that all celestial bodies did not revolve around Earth.

At the same time, Galileo figured that if Aristotle and others had been wrong about an Earth-centered universe, they might be wrong about other things, including the idea that heavier objects fall faster than lighter ones. He decided to test Aristotle's theory.

As the story goes, Galileo climbed to the top of the Leaning Tower of Pisa in Italy and dropped two balls of different weights at the same time. To the surprise of the crowd below, the balls hit the ground simultaneously. Many of them refused to believe what they had seen.

There is no actual evidence that Galileo conducted his experiment off the Leaning Tower. Regardless, his experiment with falling objects was the first to test and measure the force of gravity.

Galileo also proved that objects gain speed as they fall. But even this famed scientist failed to establish a relationship between the mysterious

force that pulled things toward Earth and the force that keeps the planets in orbit.

A CLOSED SCHOOL; AN OPEN MIND

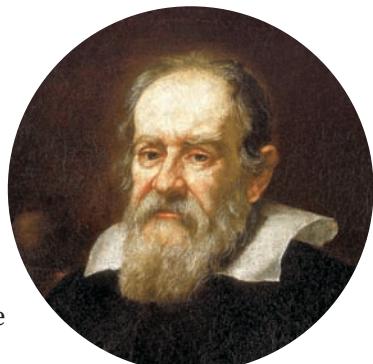
Twenty-three-year-old Isaac Newton was an undergraduate at Cambridge University in England in the late 1600s. Newton spent his time contemplating the universe.

And contemplate he did! In just a few months, Newton managed to come up with theories that would solve the mystery of gravitation and how it holds the universe together. He became the first to show that there is a connection between the invisible force we now call gravity and the way the planets move.

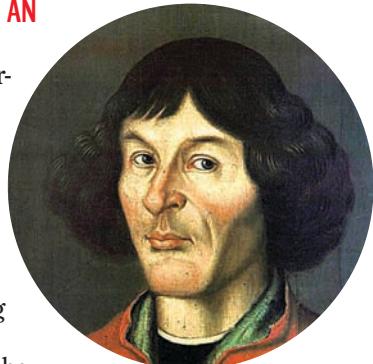
Newton claims to have formulated his theory, in part, by watching an apple fall from a tree. This simple act caused him to question how far the force of gravity reaches and, eventually, to realize that the force that caused the apple to fall could hold the moon in its orbit around the Earth ... and the Earth in its orbit around the sun ... and so on.

Newton's ideas became known as the theory of universal gravitation. The theory stated that every piece of matter — big and small — attracts every other piece of matter. It further stated that this force of attraction between two objects is directly related to the size of their masses, as well as the distance between them. Newton even came up with a whole new kind of math to prove his theories.

Newton's theory revolutionized the scientific world. It not only solved the mystery of gravitation, it laid the groundwork for modern science.



Galileo



Copernicus



Newton

DEFYING gravity

HUMANS TAKE FLIGHT

There are many things about gravity that have fascinated people throughout the years, but none as much as finding a way to break free of its mysterious hold.

The ancient Greeks, for instance, dreamed of fashioning handcrafted wings to help them overcome gravity. As one legend goes, Daedalus, an architect and inventor, made two sets of wings — one for him and one for his son, Icarus. The pair glued on the wings and flew up toward the sun.

Daedalus warned Icarus not to fly too high because the sun might melt the glue. But Icarus ignored his father's words and soared even higher. As predicted, the sun melted the glue of Icarus' wings, and the young man fell to his death.

The moral of the story? Many who heard it believed humans were not meant to fly.

Still, many people refused to believe that humans couldn't someday take flight. The famous Italian artist Leonardo da Vinci, who was also an engineer, made some of the first drawings of flying machines in the 15th century. But the technology to make the machines work was not available.

People began to seriously experiment with flying machines in the late 1700s and early 1800s. They built hang gliders that looked like birds and balloons filled with hot air. Later, large airships called dirigibles were also used to help people in their attempts to defy gravity.

DOING IT THE WRIGHT WAY

Inspired by early hang gliders, brothers Orville and Wilbur Wright built the first successful airplane in 1903 in Kitty Hawk, N.C. It was a two-winged plane with a small, gasoline-powered engine. When Orville flew the motorized vehicle to a distance of 120 feet, modern aviation was born.

Few people took notice of the Wright brothers' accomplishment, but that didn't stop them from working to improve their inven-



First successful flight of the Wright Flyer, by the Wright brothers. Orville Wright was at the controls of the machine, lying prone on the lower wing.



Orville Wright Wilbur Wright

tion. Two years later, they built an airplane that could fly for more than 30 minutes at a time.

Eventually, the brothers captured people's attention with their airplane's flying ability. Soon, other inventors began working on improving airplane design. By the 1950s, passenger planes with jet engines gave more people the opportunity to experience flight and to overcome gravity's hold.

AN OUT OF THIS WORLD EXPERIENCE

While the Wright brothers were perfecting their flying machines, others were setting their sights higher. They dreamed of escaping gravity's pull altogether and traveling into outer space.

In fact, eight years before Orville and Wilbur made history, a Russian math teacher began publishing articles on space travel. Konstantine Tsiolkovsky was probably

the first to suggest that the only way to completely escape gravity's pull was through the use of rockets.

Rockets had been used in ancient times for fireworks and, later, in warfare. Rocket propulsion was provided by black gunpowder.

But Tsiolkovsky realized that gunpowder was not powerful enough to make an object reach Earth's escape velocity — 7 miles per second. He suggested a mix of liquified hydrogen and oxygen.

American rocket engineer Robert Goddard took Tsiolkovsky's suggestion to heart and in 1926 began launching liquid-fuel rockets. Further advances followed, and in 1957, the former Soviet Union launched the first liquid-fuel rocket into outer space.

With this accomplishment, the "space age" began. Today, with space probes, space shuttle flights, satellites and space stations, we are no longer held tight to Earth by gravity's relentless tug.



ART IN MOTION

Italian artist Leonardo da Vinci sketched numerous drawings for flying machines, including a helicopter in 1483. But it would be many years before such a machine would successfully take flight. It was a single-rotor helicopter built and flown by Igor I. Sikorsky in 1939. The inspiration for Sikorsky's invention is said to have been Leonardo's drawing.



A variety of animals have made aviation history, including Laika, the first dog in space. Laika's flight aboard the Soviet Union's Sputnik 2 proved that animals could survive the effects of reduced gravity. Write an editorial that would persuade NASA to send your pet (or fictional pet) on the next space shuttle mission. *Don't forget: Editorials are opinions based on facts. Be convincing!*

Myths and legends — fictitious stories that often attempt to explain the phenomena of nature — are filled with references to human attempts to fly. Do research to find an example of such a myth or legend. Turn it into a newspaper story featuring the five Ws: who, what, when, where, and why. What does the myth or legend tell you about early ideas concerning flight?

Observe your surroundings. Identify 10 ways gravity is at work in your life. Talk about how things would be different if there was little or no gravity on Earth.

A simple mathematical formula helped Newton explain much about our universe. Using your newspaper, find references to at least five instances where math is being used in everyday life. What conclusions can you draw?

Thanks to Newton's ideas about gravity, scientists have been able to learn even more about our universe. One of the things they have calculated is Earth's escape velocity, or the speed with which an object must travel to escape gravity's pull. Earth's escape velocity is 7 miles per second. How many miles per hour would an object have to travel to escape Earth's gravity?

GRAVITY

FROM PAGE 1

universe together. Gravity is weaker than the other three – electromagnetic and the strong and weak nuclear forces – but it affects the way the planets, moons and stars are formed, how they move and how they relate to other heavenly bodies.

You can't see gravity, but you can measure it. When you weigh an object, you are measuring the pull of gravity on it. The bigger the object, the greater the pull of gravity and the more the object weighs. The pull of gravity decreases as you move away from the center of a mass. On Earth, for example, you will weigh slightly less on a mountain top than you do in a valley. And if you flew into outer space, far away from Earth's powerful pull, you'd weigh nothing at all.

You can also observe gravity's effects. Whether it's the rise and fall of ocean tides or that simple act of throwing a ball into the air and watching it fall, you can see gravity work its wonders every day.



You can defy gravity – without ever leaving your classroom. Try this experiment:

- You will need a plastic, two-liter soft drink bottle with screw-on top, a bowl, water and scissors.
- With adult supervision, use the scissors to poke several holes in the bottom of the soft drink bottle. Stand the bottle in the bowl and quickly fill it with water. Screw the top on immediately.
- Lift the bottle and see what happens. No water flows out of the holes because the air beneath the bottle pushes up against the holes, working against the force of gravity and keeping the water in the bottle.
- Now, unscrew the top. What happens?
- By removing the top, you are allowing air to enter the bottle and push down on the water. This causes the water to flow out of the bottle.

— Adapted from "The Science Book of Gravity," by Neil Ardley

Legend has it that many people watched Galileo conduct his experiment off the Leaning Tower of Pisa but still refused to believe that heavy and light objects fall at the same speed. After all, they had long been taught otherwise.

Try these simple experiments to "see" if you believe:

- You will need two balls of different weights – a ball bearing and a light plastic ball, for instance. You will also need a metal tray. (To expand the experiment, you will need modeling clay.)
- Now, standing up, hold the two balls above the metal tray (make sure your hands are level). Drop the balls at the same time and listen as they hit the metal tray. Do they hit at the same time?
- If you want to see if the heavier ball hits the ground with greater force, roll out modeling clay on the metal tray. Drop the balls again, then compare the impressions they leave on the clay. What conclusions can you draw?
- One step further: What would happen if you used a very light object, such as a sheet of paper, and an entire magazine in the above experiment? Research the effect of air resistance on a falling object.

— Adapted from "The Science Book of Gravity," by Neil Ardley, and "Cosmic Science," by Jim Wiese.



Connect 1•2•3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1•2•3
NIE Deseret News
55 N. 300 West

Salt Lake City, UT 84101
801-237-2172

NIE director: Cindy Richards
Art director: Heather Tuttle

**CLASSROOM
Connections**

If you would like to receive FREE copies of Connect 1•2•3 for your classroom, order on the Web at deseretnews.com/nie.

Read Today
POWERED BY
Deseret News



Read Across America Day

Reading pays off for American Fork elementary students. On Friday, March 11, 2016, Read Today kicked off a new summer reading program. It is sponsored by Read Today, a nonprofit initiative run by KSL, Deseret News and Deseret Management Corp.

The program – a collaboration between Read Today, the Governor's Reading Program, the Salt Lake Bees, McDonald's and the Utah State Library – will reach all students in Utah. During the Chopper 5 visit, students from the school received reader reminder bracelets, sunglasses, and a bookmark announcing the new program and information on how to sign up.

During March, every child in Utah in grades K-6 will receive a bookmark encouraging them to take part in the Summer Reading Program. For more information on the program, visit readtoday.com and click on "SUMMER READING."

S P O N S O R E D B Y

MOUNTAIN AMERICA
CREDIT UNION



MOUNTAIN AMERICA
CREDIT UNION

Let compound interest work for you

You work hard for your money, so why not make your money work for you?

Compare these three ways of managing your money:

Daily saving

Save a dollar a day in a jar. After 10 years you'll have \$3,650. Simply saving your money — and not spending it — adds up.

But your money isn't working for you yet — and it's not safe or protected by insurance.

Weekly saving

Once a week, put \$7 in your credit union savings account. This is called a periodic investment.

Assume the dividend rates stay fixed at 0.50 percent. After 10 years you'll have \$3,640, plus \$93 in interest, totaling \$3,740. Your money is working.

One-time savings

Remember that \$3,650 you received at your graduation party? (How could you forget?) Put it in a credit union certificate of deposit with a fixed rate of 1 percent. This is called a lump-sum investment.

After 10 years you'll have \$3,650 plus \$382 in interest, totaling \$4,032.

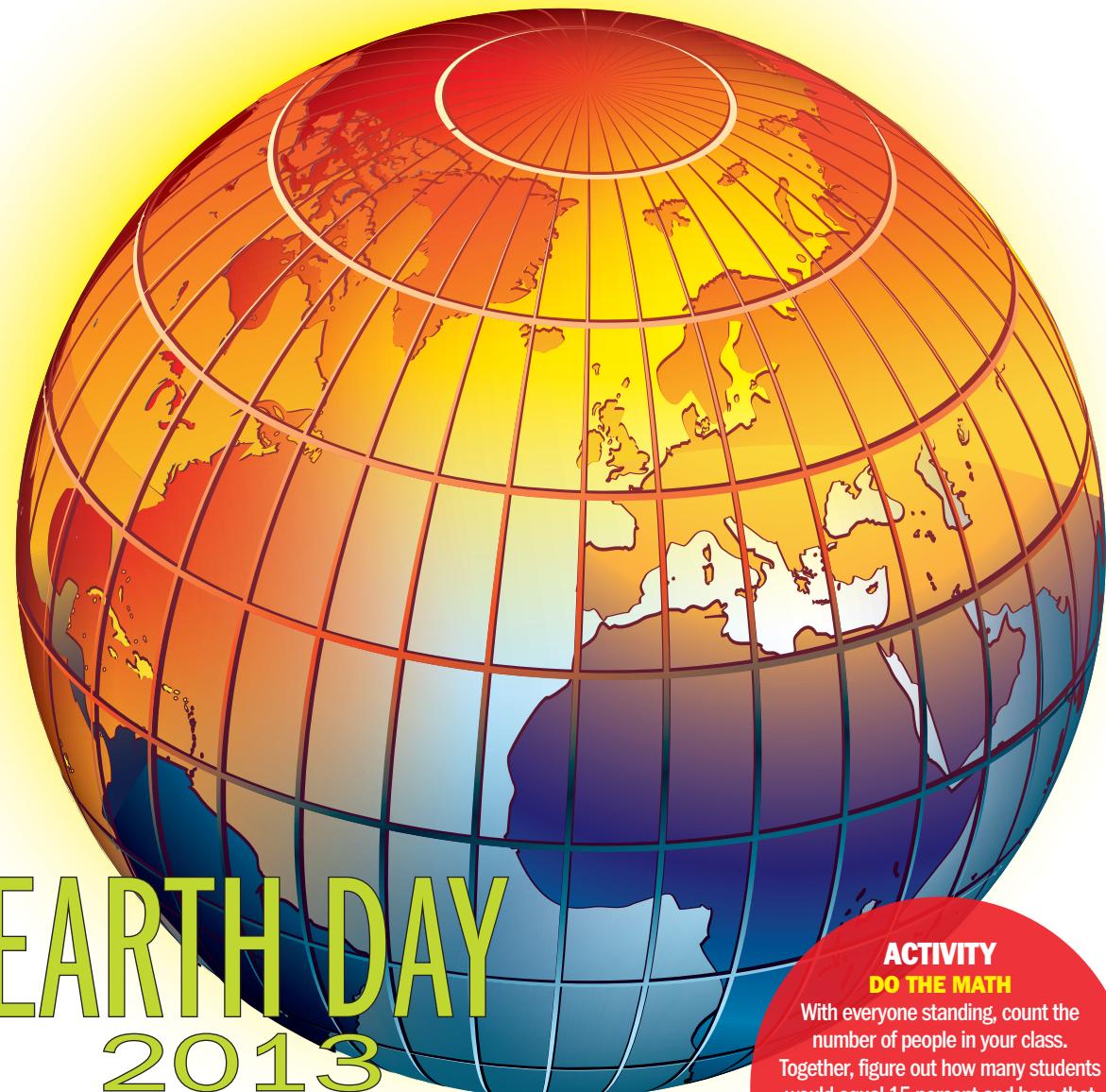
What causes such a difference in earnings? Compound interest.

When you leave your money in your account, you earn interest on the interest, as well as on the original amount. That's called compound interest.

In the example, the earnings from periodic investments are about half the earnings from one lump-sum investment. That's because:

- The weekly \$7 investments earn interest on small amounts that slowly get larger;
- The \$3,650 lump-sum investment earns interest on a large amount right from the start.

Of course, you'll grow your accounts faster if you combine both kinds of investments. Most important? Don't delay and start today.



SHUTTERSTOCK

ACTIVITY DO THE MATH

With everyone standing, count the number of people in your class. Together, figure out how many students would equal 15 percent and have that number of students "play dead." Now figure out how many students would equal 37 percent and have that number of students play dead.

Is there anything better than a warm, sunny day? All winter, we wait for the weather to warm up so we can throw off our sweaters and pull on our shorts. Warm days let us play in the parks and playgrounds, ride our bikes or head for the swimming pool.

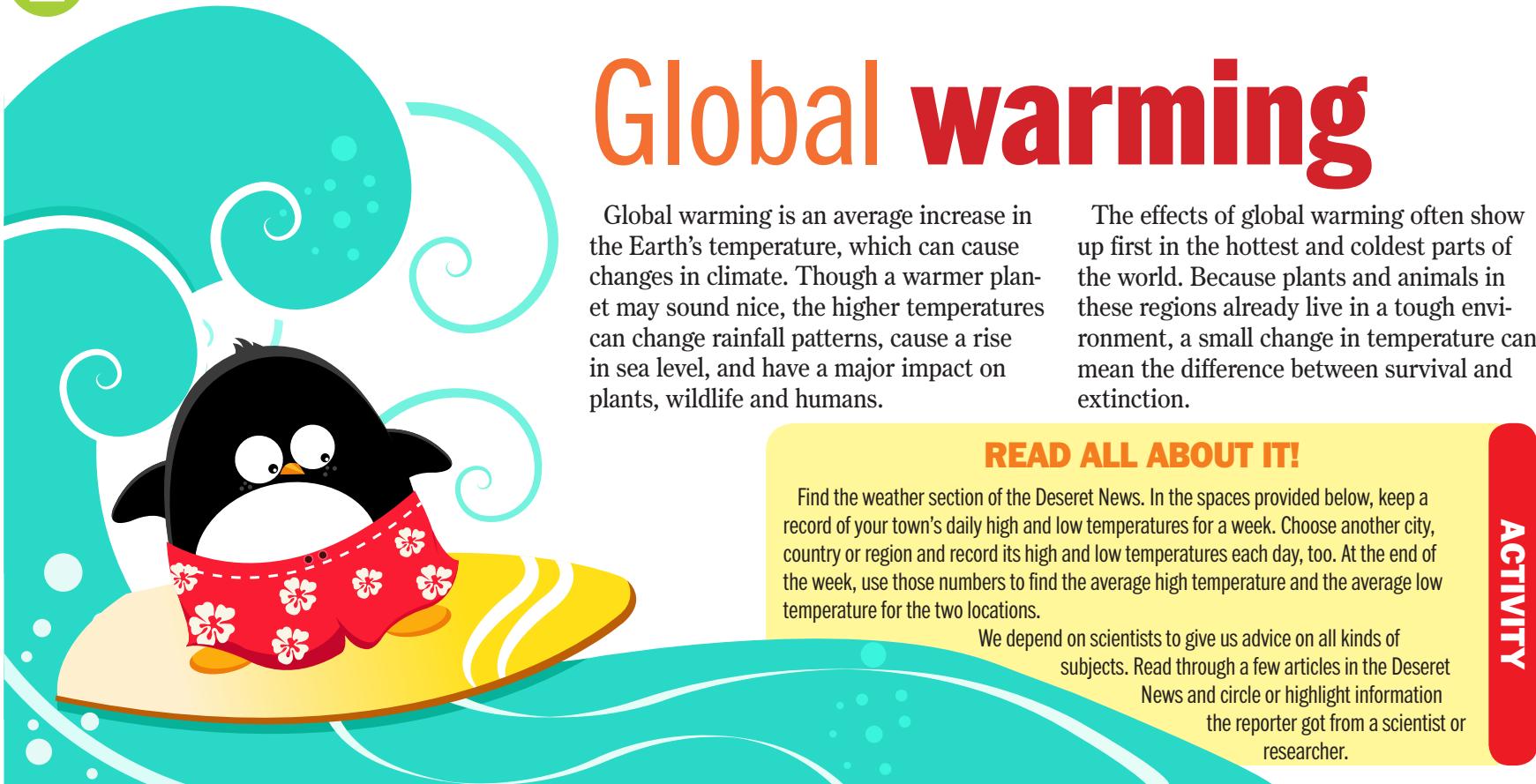
But could our weather be getting too warm? Scientists think so. Environmental scientists and geoscientists study the Earth and its history. They measure and track all kinds of information so they can help us protect

the environment. Scientists tell us what may happen in the future and give advice on taking care of our wonderful planet.

Their studies are telling us that the Earth's temperature is changing. It's getting warmer. How much warmer? Over the last 100 years, the average global temperature has gone up about 1 degree Fahrenheit, and scientists predict an increase of another 2 to 6 degrees Fahrenheit in the next 100 years. This gradual but constant temperature increase is called global

warming.

Over a long period of time, a small change, just 1 degree, can have a big impact. The National Wildlife Federation estimates that 15 percent to 37 percent of species will be pushed toward extinction in the next 50 years because of changes in climate brought on by global warming.



Global warming

Global warming is an average increase in the Earth's temperature, which can cause changes in climate. Though a warmer planet may sound nice, the higher temperatures can change rainfall patterns, cause a rise in sea level, and have a major impact on plants, wildlife and humans.

The effects of global warming often show up first in the hottest and coldest parts of the world. Because plants and animals in these regions already live in a tough environment, a small change in temperature can mean the difference between survival and extinction.

READ ALL ABOUT IT!

Find the weather section of the Deseret News. In the spaces provided below, keep a record of your town's daily high and low temperatures for a week. Choose another city, country or region and record its high and low temperatures each day, too. At the end of the week, use those numbers to find the average high temperature and the average low temperature for the two locations.

We depend on scientists to give us advice on all kinds of subjects. Read through a few articles in the Deseret News and circle or highlight information the reporter got from a scientist or researcher.

ACTIVITY

CITY	SUN	MON	TUE	WED	THU	FRI	SAT
AVERAGE TEMP.							
CITY							
AVERAGE TEMP.							

THE Greenhouse EFFECT

Have you ever stepped into the warmth of a greenhouse or gotten into a closed-up car that has been sitting in the sun? If so, you've experienced the greenhouse effect.

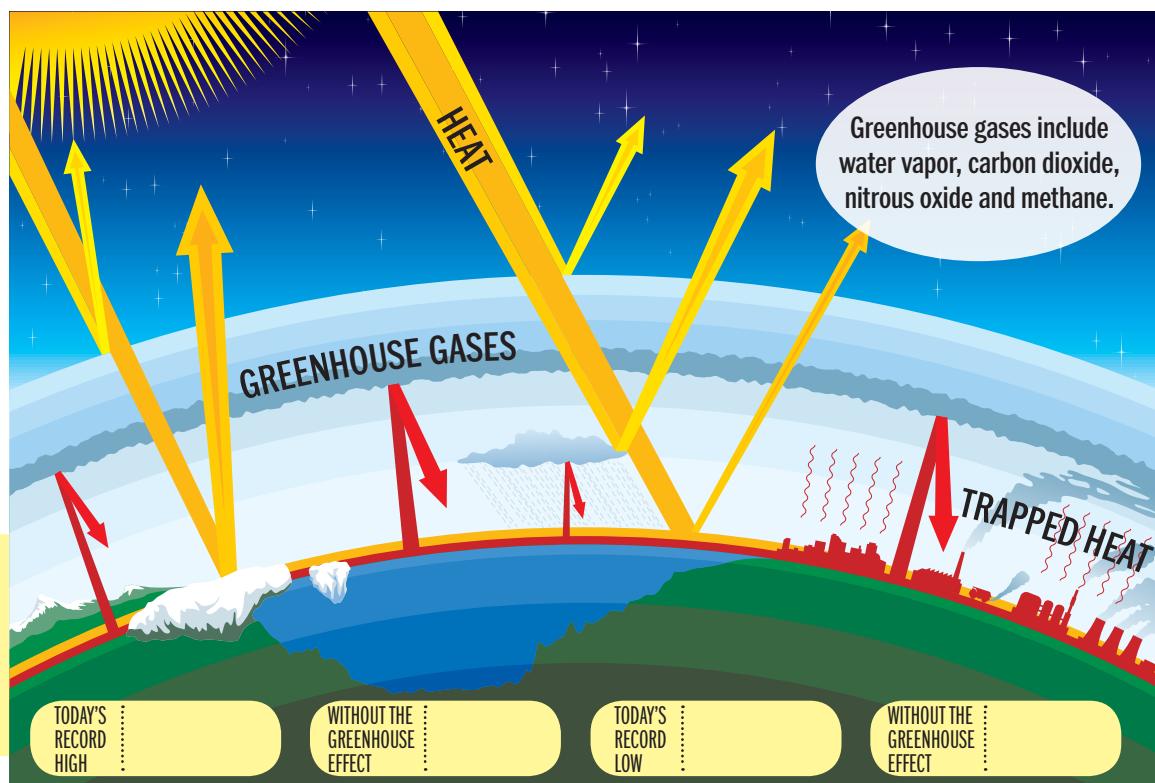
Think of Earth as that greenhouse or car. Heat from the sun comes into our atmosphere and is trapped by a blanket of greenhouse gases.

Those gases guarantee our survival. Without them, the heat from the sun would come in but escape right back out, leaving our home planet cold and bare. In fact, the greenhouse effect keeps Earth warm enough for life to exist here, for people to live here. If we didn't have the greenhouse gases, the average temperature on Earth would be about 60 degrees Fahrenheit colder.

ACTIVITY

FIGURE IT OUT

Go back to the weather page and look for record highs and lows for your area. What would those record temperatures be without greenhouse gases? Now estimate what temperatures throughout the year would be like without the greenhouse effect.



TOO MUCH OF A Good thing

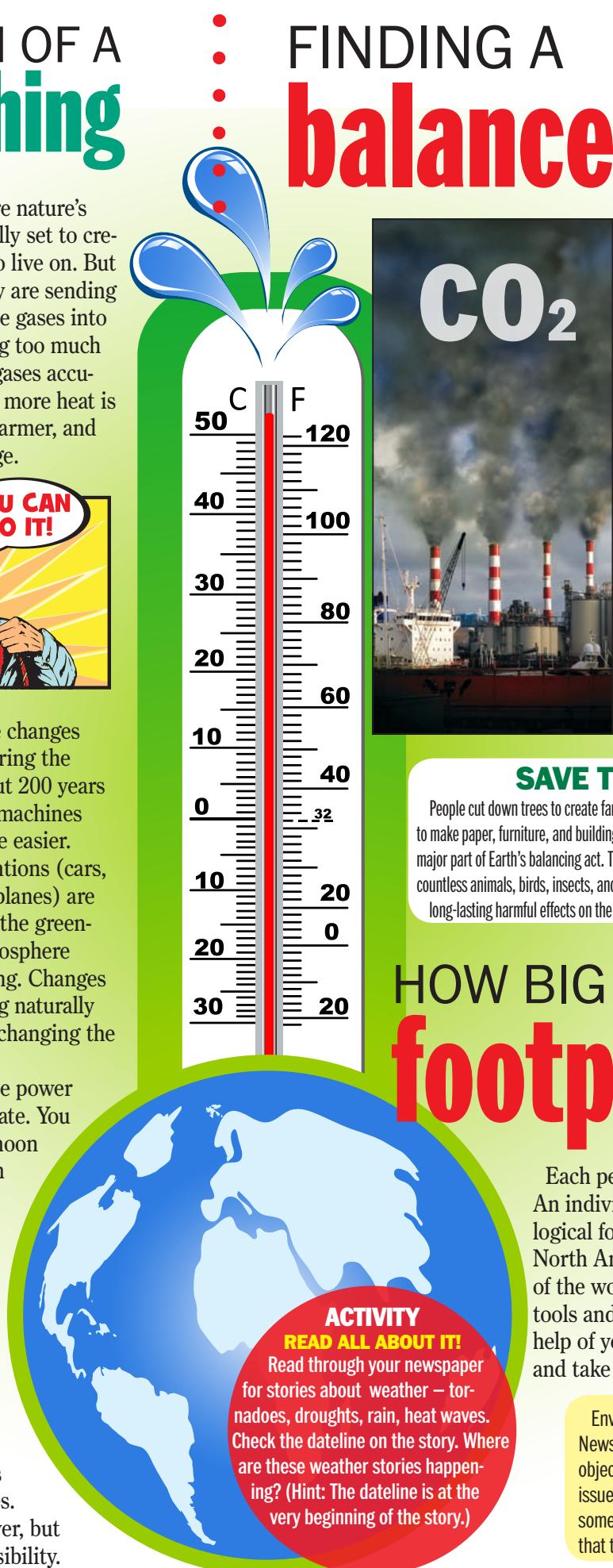
Greenhouse gases are nature's thermostat, naturally set to create a cozy planet to live on. But things people do every day are sending more and more greenhouse gases into the atmosphere — creating too much of a good thing. As more gases accumulate in the atmosphere, more heat is trapped, the planet gets warmer, and the climate starts to change.



It used to be that climate changes occurred naturally. But during the Industrial Revolution about 200 years ago, people started using machines and inventions to make life easier. Those machines and inventions (cars, electricity, computers, airplanes) are adding too many gases to the greenhouse gas layer in the atmosphere and causing global warming. Changes in climate aren't happening naturally anymore. People are now changing the Earth's climate.

Imagine that you have the power to change the Earth's climate. You could dry up a rainy afternoon and make those nice warm summer days last a few more months. That may sound like a good thing, but nature is carefully balanced. We need the rain in its normal patterns to keep plants alive and replenish water supplies. We need both the warm weather and the cold so plants and animals can live out their life cycles. It's wonderful to have power, but with power comes responsibility.

FINDING A balance



Carbon dioxide (CO₂) is one of the most important greenhouse gases. It is also the one people have the strongest effect on.

All living things — trees, plants, animals, people — are made mostly of carbon. Fossil fuels, which are formed from living things, are also made of carbon. When fossil fuels like gasoline and natural gas are burned, the carbon is released into the atmosphere as carbon dioxide.

Trees and plants absorb, use and store carbon and produce oxygen. Humans breathe in and use oxygen and produce carbon dioxide. When the environment is balanced, the exchange of carbon dioxide and oxygen throughout the Earth's atmosphere is as natural as, well, breathing.

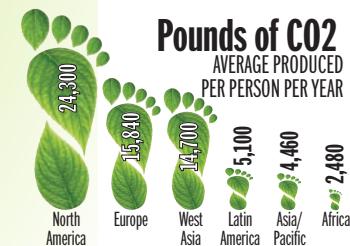
Once people started inventing and using machines and technology, though, that all changed. Driving cars, flying planes, generating electricity, burning fossil fuels — all these processes release enormous amounts of CO₂ into the atmosphere. At the same time, we are cutting down trees and paving over natural habitats, greatly reducing the populations of our CO₂-absorbing partners. As plant habitats disappear and human inventions continue to pour CO₂ into the atmosphere, the layer of greenhouse gases gets thicker, leading to global warming.



SAVE THE TREES

People cut down trees to create farmland or clear land for homes. We also cut trees to make paper, furniture, and building materials. This is called deforestation. Trees are a major part of Earth's balancing act. They absorb carbon dioxide and create habitats for countless animals, birds, insects, and plants. Irresponsible deforestation can create long-lasting harmful effects on the Earth's ecosystem.

HOW BIG IS YOUR footprint?



Each person on the planet has an impact on the environment. An individual's environmental impact is known as his or her "ecological footprint." Research is showing that those of us living in North America are making much bigger footprints than the rest of the world. We have more cars, bigger houses, more electronic tools and gadgets — all of which add to global warming. With the help of your teacher, find a website with a footprint "calculator" and take turns measuring your footprints.

Environmental issues often create two very strong opposing sides. Newspaper reporting is supposed to try to cover all sides of a story objectively or fairly. Newspaper editorials usually discuss one side of an issue. Look through the Deseret News' editorial section and read through some of the articles there. Can you see a difference between the stories that tell both sides equally and the editorials?

ACTIVITY

YOU CAN MAKE A difference

Whenever you use electricity to:

- Play a video game
- Watch TV
- Turn on a light
- Dry your hair
- Use the microwave
- Do laundry
- Turn on the air conditioning

You are sending greenhouse gas into the atmosphere.

Whenever you use fossil fuels to:

- Warm up your shower water
- Heat your house
- Drive in a car
- Fly to Disney World

You are sending greenhouse gas into the atmosphere.

Does that mean you can't do any of these things? **No.** But if you do them more efficiently, you'll reduce your footprint and help slow down global warming.

Every person can make a difference.



Elephant made from recycled plastic bottles

Connect 1•2•3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1•2•3
NIE Deseret News
55 N. 300 West

Salt Lake City, UT 84101
801-237-2172

DID YOU KNOW
The first piece of paper was made from recycled material. Around 200 B.C., the Chinese made the world's very first piece of paper from fishing nets.

SMALL CHANGES : big results

One list at the left shows activities that require electricity, while the other shows activities that require fossil fuels. But actually, electricity is also generated with fossil fuels. Most power plants use coal and oil to make electricity. In fact, generating electricity is the biggest source of man-made CO₂ pollution. That's why it's so important to conserve energy in all its forms. Here are some tips on how to do that:

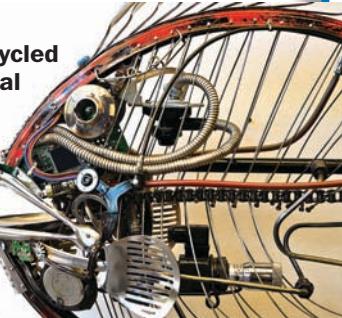


When it comes to recycling, we deserve a pat on the back. Though there's room for improvement, Americans are recycling more than ever. Just look at these numbers:

Americans are now recycling:

- 40 percent of all plastic soft drink bottles
- 42 percent of all paper
- 52 percent of all major appliances
- 55 percent of all aluminum beer and soft drink cans
- 57 percent of all steel packaging

The amount of electricity needed to produce one ton of paper would power your house for two months.



THE ART OF recycling

Have you ever looked at a water bottle and thought, "that would make cool leg for a robot." How about an empty egg carton? The saying "One man's trash is another man's treasure," has become the mantra for artists everywhere. So, what could you create from objects that might otherwise be discarded? Get your class involved and have a recycled art show!



The City Library

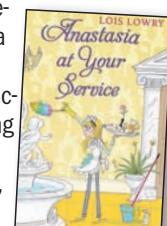
THE SALT LAKE CITY PUBLIC LIBRARY SYSTEM

Look for these Money Smart books at your local library.

"One Hen: How One Small Hen Made a Big Difference," by Katie Smith Milway of Kojo, a boy from Ghana who turns a small loan into a thriving farm and a livelihood for many.



"Anastasia at Your Service," by Lois Lowry. Twelve-year-old Anastasia has a series of disastrous experiences when, expecting to get a job as a lady's companion, she is hired to be a maid.



"Millions," by Frank Cottrell Boyce. When fourth-grader Daman finds a bag full of cash by the train tracks, he and his brother try to spend it fast.



"The Secrets of Blueberries, Brothers, Moose and Me," by Sara Nickerson.

Twelve-year-old Missy and her older brother Patrick think they're in for another boring summer, but an ad for blueberry pickers changes everything.



"Run Your Own Yard Sale," by Emma Carlson Berne



S P O N S O R E D B Y



MOUNTAIN AMERICA
CREDIT UNION