Why is the

SKY BLUE?

3RD Grade

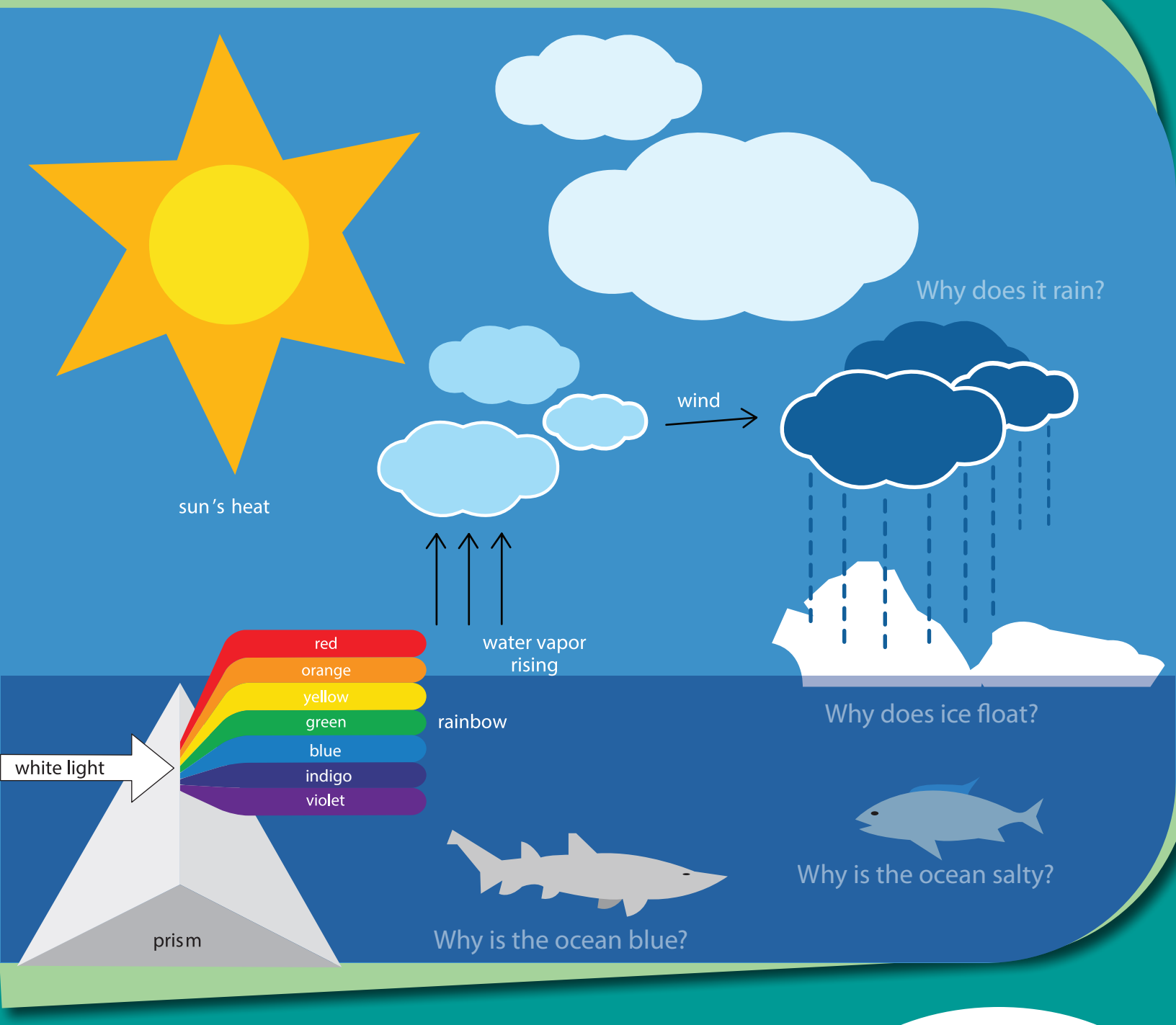

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Table of Contents

Why is the Sky Blue?

** Has an Answer Sheet*

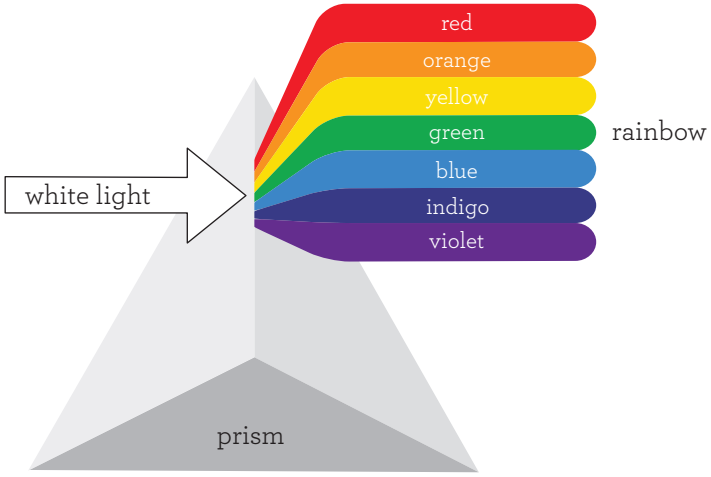
WHY AND HOW

Why is the sky blue?

To understand why the sky is blue, we must first understand the physics of light and color.

The light from the sun seems white to us, but white light is actually made up of all the colors of the spectrum: red, orange, yellow, green, blue, indigo and violet!

We see objects in color because those objects absorb some of the colors in white light, and reflect the colors that we see! For example, grass reflects the color green and absorbs all the other colors.



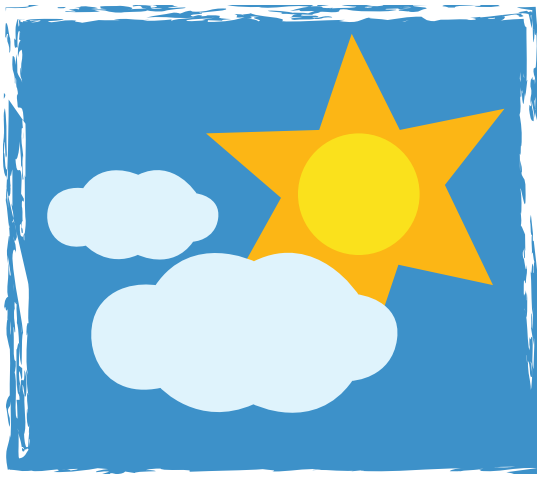
QUESTION & ANSWER:

What colors make up the white light of the sun?

If you see a blue car, what color/s does it reflect?

If you see a red apple, what color/s does it absorb?

The sky is blue because it has to travel through Earth's atmosphere, where there are lots of gases that absorb red, orange and yellow colors. Then, the blue light gets scattered all across the sky, which is what we see when we look into the sky.



WHY AND HOW

Why is the ocean blue?

The ocean appears blue to us because of the light from the sun.

We often think that the sun's light just allows us to see, but without light, colors wouldn't even exist!

What we see as white light from the sun is actually a combination of all the colors of the rainbow. Try and imagine red, orange, yellow, green, blue, indigo and violet rays of light streaming from the sun. Objects either absorb or reflect these rays.

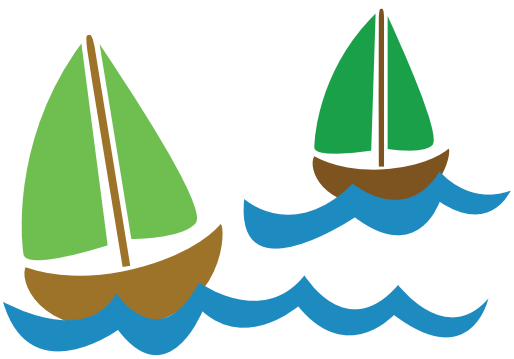
QUESTION & ANSWER:

What colors make up the light from the sun?

What color/s does the ocean reflect?

What color/s does the ocean absorb?

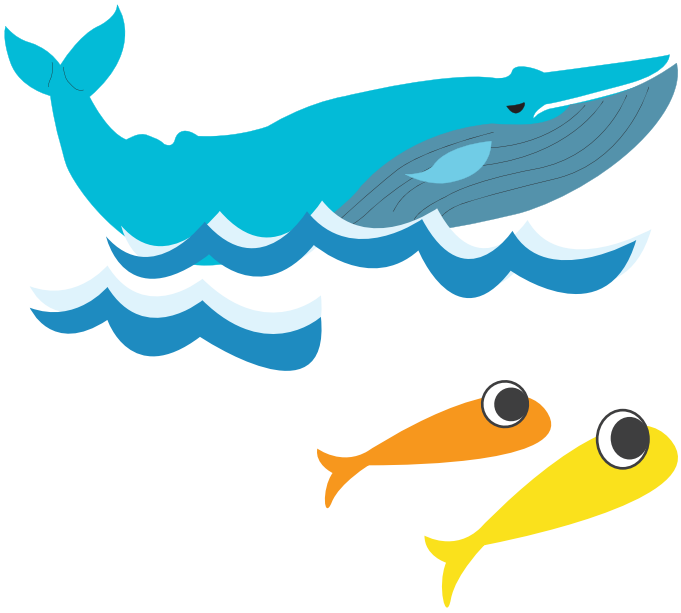
When the sun's light hits the ocean, the red, orange, yellow, green, indigo and violet rays are absorbed so that we can't see them! Only the blue light is reflected. The ocean itself isn't really blue; we're just seeing the reflected blue light.



WHY AND HOW

Why is the ocean salty?

The ocean has been salty for a long time–way before humans were around to use it as a seasoning!

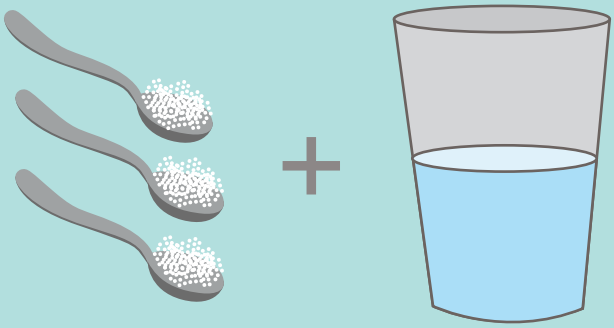


Millions of years ago when our planet was first forming, gasses from deep within the earth started bubbling up to the surface. These gasses contained tons of salt, and when they bubbled up into the ocean, the salt was released.

Today, rain water continues to deposit even more salt into the ocean. When rain droplets fall on land, they often pick up pieces of salt. Some of these droplets slip and slide across the land to eventually reach the ocean.

ACTIVITY:

Make your own salt water by mixing several teaspoonfuls of regular table salt into a glass of water. Leave it out on a sunny windowsill for a couple of days. The water will evaporate, but salt residue will stay in the glass.



Why do you think this happens?

WHY AND HOW

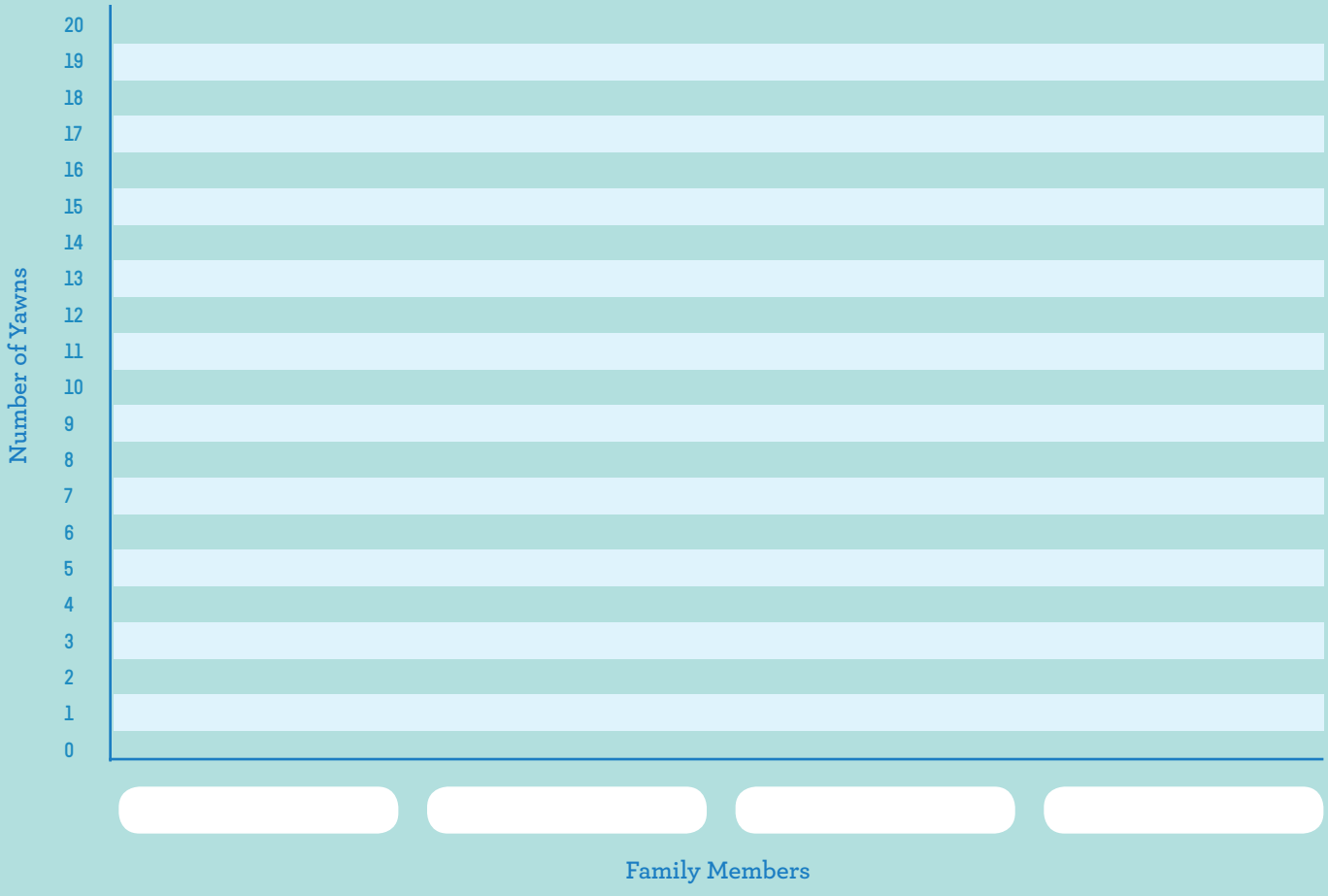
Why do we yawn?

We often yawn because we are sleepy or bored. Sometimes we even yawn because someone next to us yawned.

Scientists have a lot of theories to explain why these situations cause us to yawn, but nobody knows exactly why it happens. One theory is that our bodies are trying to get more oxygen. That's why we take a yawn, which is essentially just a bigger breath than usual. Another theory states that our bodies are trying to cool our brains by taking in more air.

ACTIVITY:

Did you know that the average adult yawns 20 times per day? Ask the members of your family to keep track of their yawns for one whole day. Graph the results here.

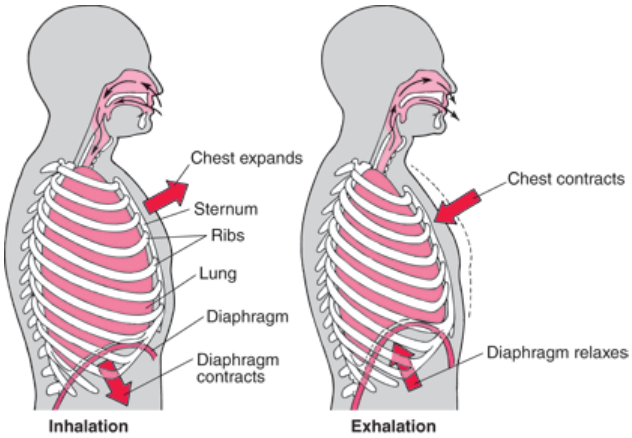


Why do we hiccup?

The often annoying hiccup happens when our diaphragms get upset.

The diaphragm is a muscle at the bottom of the rib cage that helps pull air into our lungs when we breathe. Every once in a while, the diaphragm gets irritated and starts pulling air into the lungs the wrong way. We experience this as a hiccup.

Eating too quickly, drinking cold beverages, and swallowing air are just a handful of ways the diaphragm can get upset enough to cause hiccups. In other words, the diaphragm can be kind of sensitive.



There are lots of "home remedies" that people use to get rid of the hiccups. Lots of them are silly.

Do you think any of these methods actually work? Why or why not?

Eat a spoonful of sugar.

Drink water from the opposite side of the glass.

Chug a glass of water.

Hold your breath.

Get SCARED!

Cover your ears.

What methods do you use to cure your hiccups?

QUESTION & ANSWER:

Hiccups are caused by the involuntary contraction of what muscle?

Write down some ways that the diaphragm can be irritated.

Why do people blush?

When some people get embarrassed, their cheeks turn red. We call this blushing, and it also can occur when a person is anxious or angry.

The science behind blushing is pretty simple: your body sends extra blood to your face which causes your cheeks to redden. The reason this happens is not so clear. Scientists have suggested that our bodies blush to reveal how we really feel. Next time you're anxious to get in a game or embarrassed that you dropped your ice cream on the floor, your cheeks just might give you away!

Did you know that some people are afraid of blushing? The fear of blushing is called erythrophobia.

Why do you think people suffer from erythrophobia?

QUESTION & ANSWER:

What causes your cheeks to redden?

.....

.....

What is a possible reason behind blushing?

.....

.....

What is erythrophobia?

.....

.....

Why do we dream?

In our dreams, we can be anything from superheroes to animal tamers, but we can also be pursued by monsters or arrive late to school. But why do we have certain dreams? Do our dreams mean anything? Scientists have lots of theories to answer these questions, but no real answers quite yet.

Dreaming may be our bodies' way of storing up memories and thoughts. Throughout the day, we each create a nearly infinite amount of experiences. These experiences may organize themselves in our brains as dreams.

Another theory is that dreams help our bodies interpret what our brains have been thinking about. If you dream about missing the bus and forgetting all your school supplies, you may be nervous about school starting.

We remember our dreams best immediately after we wake up. Keep a notepad by your bed tonight and write down everything you remember tomorrow morning.

Can you figure out why you dreamed what you did?

WHY AND HOW

Why do cats purr?

Cats purr for the same reason that humans sigh, smile and sing. It's a communication tool that means different things at different times.

A cat's purr can be broken down into three separate categories: the happy purr, the friendly purr and the reassuring purr.

The happy purr is the most popular purr. When you scratch a cat behind the ears, the purr signals the cat's own comfort and enjoyment. The friendly purr often happens when a cat is approached by a human he likes or another cat. This second type of purr simply communicates that the cat welcomes the visitor. Lastly, cats use the reassuring purr when they are afraid. Scientists believe that purring calms the cat, in the same way humans sometimes sing when they're nervous to make them feel better.

Identification:

Based on the reading, identify what type of purr cats make in these situations:

..... a cat being scratched

..... two cats walking towards each other

..... a cat at a vet

..... when a cat gets a treat

..... a mother cat giving birth

..... when approached by a stranger

Mechanics behind a purr:

Purrs involve various muscles in a cat's body. The larynx, or voice box, and diaphragm play key roles in the mechanics of purring.

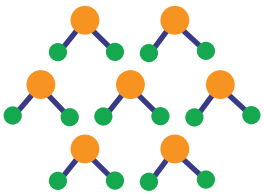
The diaphragm moves the air in and out of the vibrating vocal cords which causes the sound.

WHY AND HOW

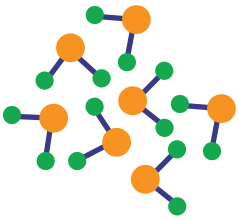
Why does ice float?

Even though ice is the solid form of water, it actually has a lower density than its liquid counterpart.

When water freezes, its molecules actually spread out a bit and organize themselves into crystal arrangements. Water molecules, on the other hand, have tightly packed molecules. So when you put an ice cube into a glass of water, the ice cannot sink to the bottom of the glass because the molecules in the water are too dense.



ice molecules



cold water molecules

ACTIVITY:

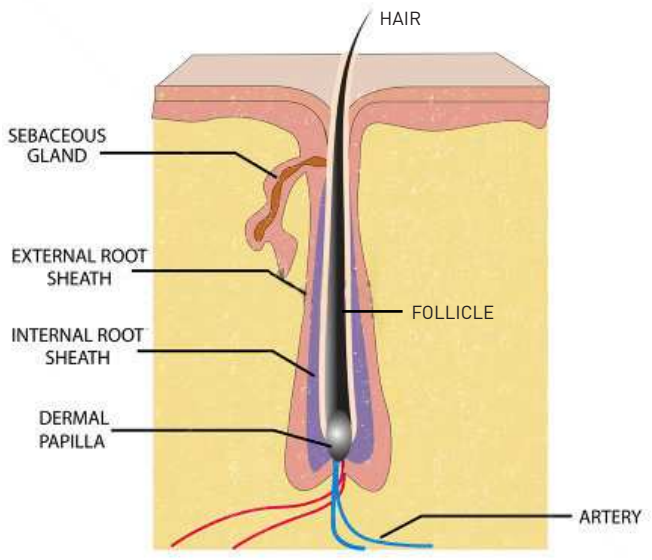
Try your own experiment. You know that ice cubes float in water, but what about other liquids? Record your findings here.

WHY AND HOW

Why does hair turn gray?

To find out why hair turns gray we have to investigate *hair follicles*.

Hair follicles are tubes of tissue that surround the roots of each hair strand. Inside the hair follicles are *pigment cells* that determine if our hair is red, brown, black or blond. As people age, their hair follicles start to die. Without enough pigment cells from these dying hair follicles, hair gradually turns gray or white.



QUESTION & ANSWER:

What are the tubes of tissue that surround the roots of each hair strand?

.....

.....

Located inside the hair follicles, what determines the color of our hair?

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What helps determine whether a person's hair turns gray or white?

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There isn't a certain age when every person starts getting gray hair. It depends on each individual's *genes*. A good way to predict when or if someone you know might get gray hair is to look at that person's parents or grandparents.

WHY AND HOW

Why are manhole covers round?

Manhole covers are removable metal plates that cover manholes. They have been around at least since ancient Rome, where there were stone sewer grates.

They are round for several different reasons. The round shape is easiest to roll when workers need to maneuver the covers out of the way. Workers don't have to rotate the cover in a certain way to fit it back in the hole. You can also get scientific about manhole covers. A round manhole cannot fall into the circular hole it covers, but any other shape could if it were to fall in diagonally.

TRIVIA:

Did you know that big companies like Microsoft and Google used to ask potential employees why manhole covers are round?

Why do you think technological companies would ask this during a job interview?

What would your answer be?

Scientists also say that round manhole covers resist compression from the Earth's crust and prevent traffic from dislodging them.

Why does the earth spin?

The Earth spins because there is nothing in its way to stop it!

Long before our planet was a solid sphere, there was just a mass of dust and gas. Earth was formed when all this matter began to spin. That's how most planets and stars are formed!

Thousands of years later, the spinning cloud of dust and gas became our planet, and thanks to our position in the Solar System, neither the sun nor the moon had the power to slow Earth's rotation enough to halt it completely.

QUESTION & ANSWER:

What was Earth before it became a solid sphere?

.....

.....

How was Earth formed?

.....

.....

Can the sun and the moon stop Earth from spinning?

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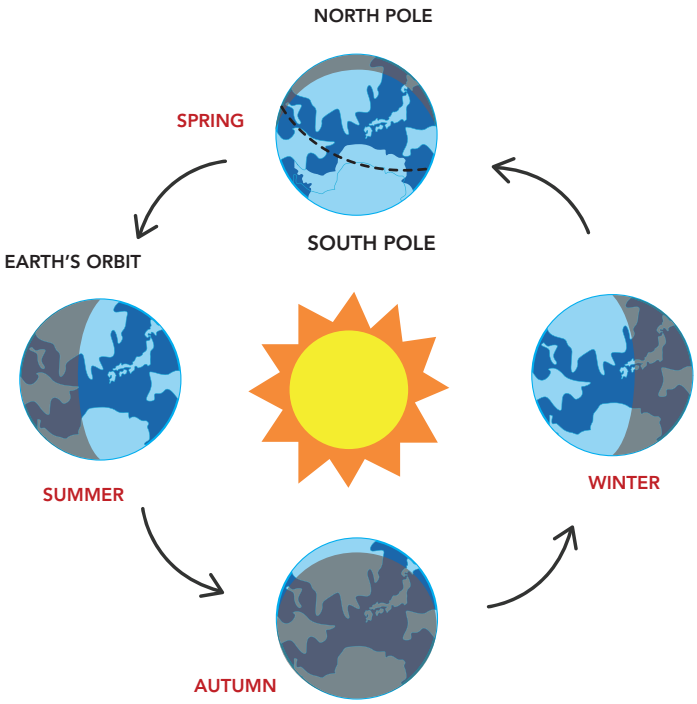
Imagine the Earth did not spin. How would this affect your life?

★ Remember that the Earth's rotation is responsible for the sun rising and setting. If the Earth did not spin, parts of our planet would spend half a year in darkness and another half a year in full sunlight.

Why is there a leap year?

The month of February usually has 28 days, but every four years it has 29. To understand this we have to understand what a year is.

One year is supposed to match the time it takes for the Earth to orbit the Sun. However, the match isn't perfect. Our year equals 365 days, but it takes Earth about 365 ¼ days to complete its orbit. That little fraction may seem insignificant, but every four years it adds up to a complete day. We give that extra day to February and call it leap year.



QUESTION & ANSWER:

How long does it take the Earth to complete its orbit?

How often does a leap year occur?

What is a person born on February 29th called?

A leap year consists of how many days?

Why is it called leap year when we're actually adding a day? It seems like it might make more sense to call it some thing like plus day or add day. We call it leap year because the addition of that one day effectively leaps the rest of that year forward by 24 hours.

A "leap year baby" is someone who is born on the last day of February in a leap year. Would a leap year baby age differently than everyone else?

How is honey made?

Without bees we wouldn't have any delicious honey to sweeten our toast or tea. Honey bees work tirelessly to produce honey in a multi-step process that is both wonderful and a bit disgusting.

First, honey bees have to use their tongues to slurp out the pollen and nectar from flowers. They actually digest all of this, allowing the pollen and nectar to mix with the proteins and enzymes of their stomachs. When the honey bees return to their hive, they regurgitate–a fancy word for throwing up this pollen/nectar/protein /enzyme mix into a beeswax comb.

The bees then flap their wings to help the mixture thicken before covering the combs with a wax cap.

After beekeepers take out these honeycombs, all they need to do is process and clean out the combs a bit. The odd combination of flower parts and bee proteins is now honey!

WHY AND HOW

How is glass made?

A beautiful glass window doesn't seem to have a lot in common with the millions of sand particles that cover beaches, but you'd be surprised!

Glass is made by melting lots of sand with several other chemicals like sodium bicarbonate and lime. The temperature has to be very hot–hot enough to reduce the sand mixture to a steaming liquid. Once the liquid starts to cool, glassmakers have only a small window of time to give it shape before the sand liquid cools into a hardened substance. If the glassmaker works fast enough, he can make the glass into anything from a vase to a window!

ACTIVITY:

Go on a glass treasure hunt in your own home! Record the different types of glass items you find. How do you think a glassmaker formed the glass into each unique shape?

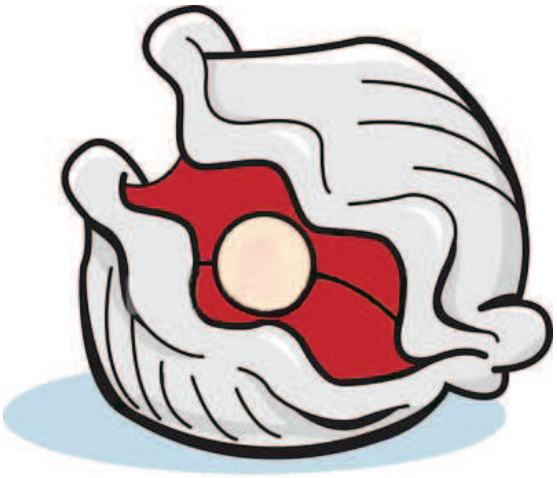
WHY AND HOW

How is a pearl formed?

Have you ever had a small piece of dust get in your eye? It was probably annoying, but when an oyster gets dust inside its shell, it turns the dust speck into a pearl!

Oysters try and protect themselves from unwanted visitors by covering any outside dust particles with a mineral substance called nacre. Layers and layers of nacre eventually form a pearl.

Natural pearls form when a piece of dust gets into an oyster's shell by chance. Cultured pearls are the result of humans forcing a dust particle into an oyster's shell. Pearls are so popular today that a lot of people don't want to wait for a pearl to form naturally!



QUESTION & ANSWER:

How do oysters protect themselves?

.....

.....

How do natural pearls form?

.....

.....

How do cultured pearls form?

.....

.....

Can you think of anything else in nature that starts off small and plain, but after a long time turns into something beautiful?

WHY AND HOW

How is a star born?

A star is a big ball of plasma that is formed from a cloud of dust and gas.

Sometimes particles of dust and gas float by each other in space without anything happening. Other times gravity clumps these clouds together into compact substances. The particles begin bouncing off of each other, creating friction and heat. Eventually, the heat becomes so intense that it creates a nuclear reaction which releases a massive amount of energy and light. The resulting substance is a star.

QUESTION & ANSWER:

What is a star?

.....

.....

What gets released after a nuclear reaction involving intense heat?

.....

.....

Did you know that celebrities and actors are often called stars?

Why do you think we compare famous people to burning lights in the sky?

WHY AND HOW

Why does it rain?

Rain comes from clouds, which are themselves made up of lots and lots of tiny droplets of water that are holding on to each other.

When the sun shines on the earth, it causes water to evaporate. The water can come from lakes, oceans, seas and even from your pool outside. As this water evaporates it rises to the atmosphere. When it reaches an altitude (height) where the temperature is very low, it condenses to form clouds. When heavy enough, these clouds release water droplets which fall back to the earth as rain or hail.

Experiment:

Note: Ask an adult to help you with this activity

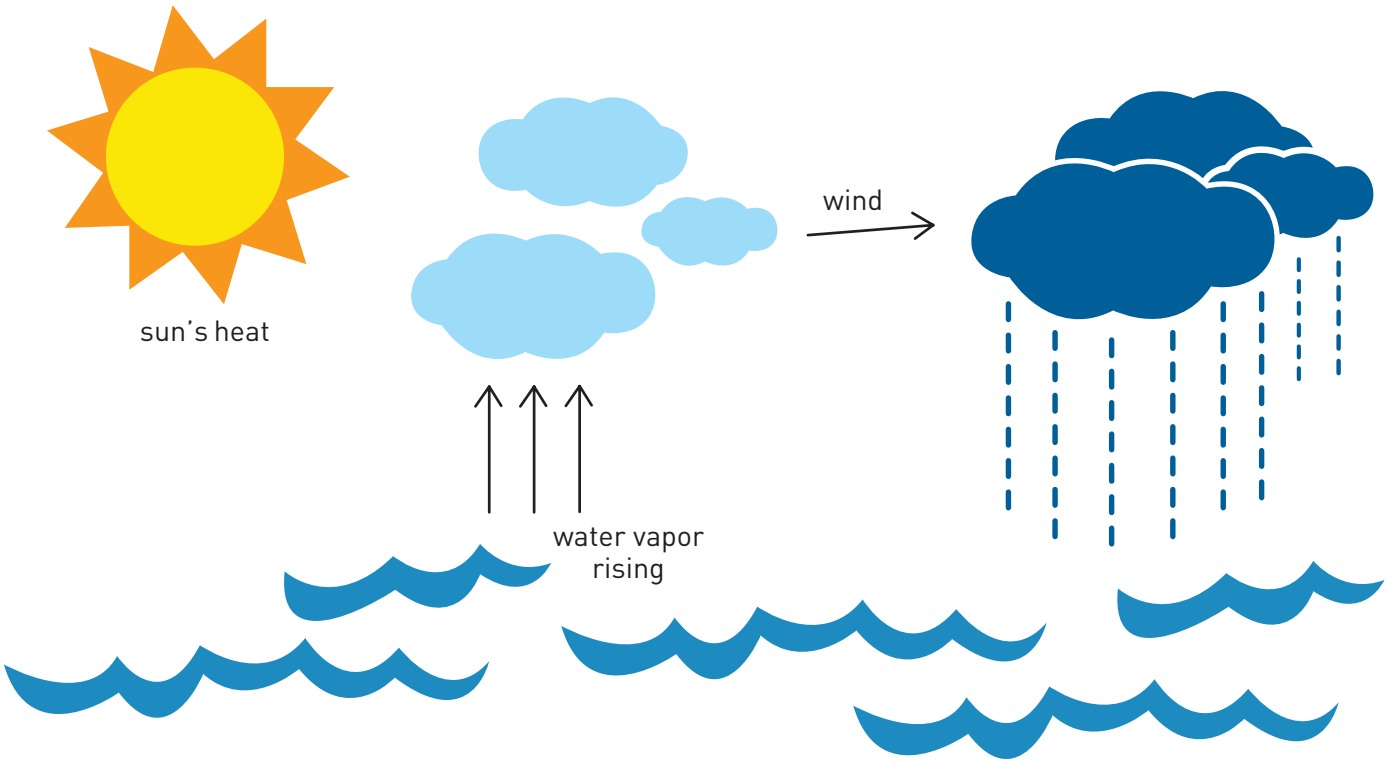
What You Need: saucepan, water, ice cubes, oven mitt

Directions:

1. Ask an adult to boil some water in a saucepan.
2. Using oven mitts to protect your hands, hold a tray of ice above the steam.
3. Drops will begin to fall like rain from the tray.

Why does this happen?

The cold surface of the ice cube tray cools the steam from the boiling water, changing it back into water in the form of rain drops.



Great job!

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Answer Sheets

Why is the Sky Blue?

Why is the Sky Blue?
Why is the Ocean Blue?
Why Do We Hiccup?
Why Do People Blush?
Why Do Cats Purr?
Why Does Ice Float?
Why Does Hair Turn Gray?
Why Does the Earth Spin?
Why is There a Leap Year?
How is Honey Made?
How is a Pearl Formed?
How is A Star Born?

Answer Sheet

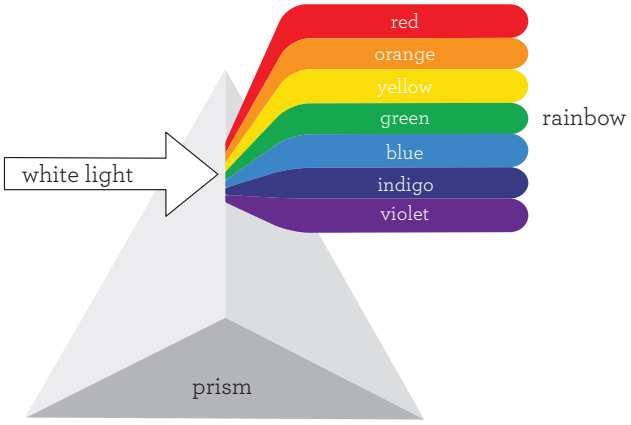
WHY AND HOW

Why is the sky blue?

To understand why the sky is blue, we must first understand the physics of light and color.

The light from the sun seems white to us, but white light is actually made up of all the colors of the spectrum: red, orange, yellow, green, blue, indigo and violet!

We see objects in color because those objects absorb some of the colors in white light, and reflect the colors that we see! For example, grass reflects the color green and absorbs all the other colors.



QUESTION & ANSWER:

What colors make up the white light of the sun?

It is made up of all the colors of the spectrum like red, orange, yellow, green, blue, indigo and violet.

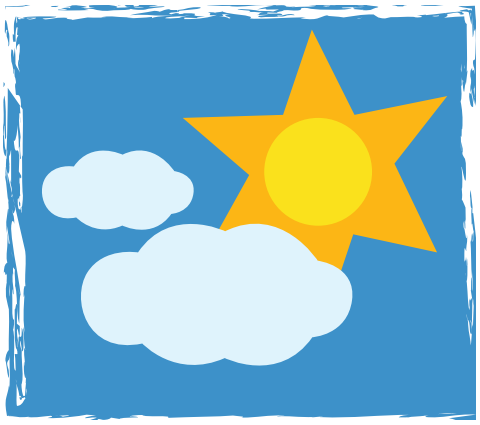
If you see a blue car, what color/s does it reflect?

The blue car reflects the color blue.

If you see a red apple, what color/s does it absorb?

The red apple would absorb all the colors of the spectrum except the color red.

The sky is blue because it has to travel through Earth's atmosphere, where there are lots of gases that absorb red, orange and yellow colors. Then, the blue light gets scattered all across the sky, which is what we see when we look into the sky.



Answer Sheet

WHY AND HOW

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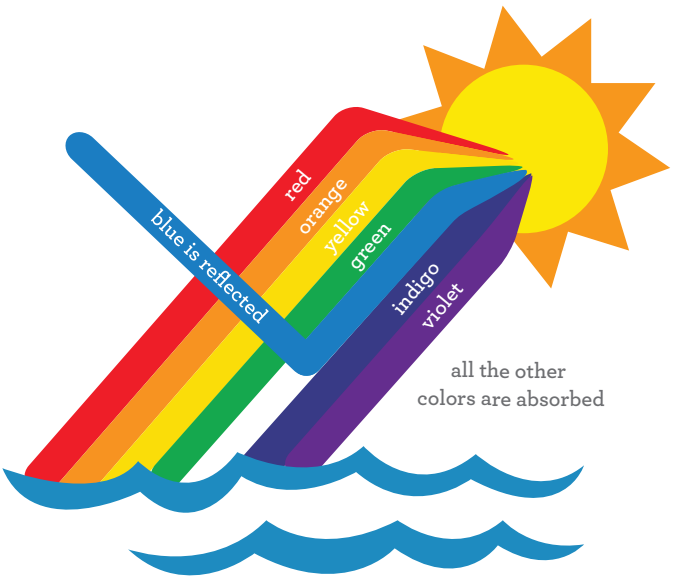
The ocean appears blue to us because of the light from the sun.

We often think that the sun's light just allows us to see, but without light, colors wouldn't even exist!

What we see as white light from the sun is actually a combination of all the colors of the rainbow. Try and imagine red, orange, yellow, green, blue, indigo and violet rays of light streaming from the sun. Objects either absorb or reflect these rays.



QUESTION & ANSWER:

What colors make up the light from the sun?

It is a combination of all the colors of the rainbow like red, orange, yellow, green, blue, indigo and violet.

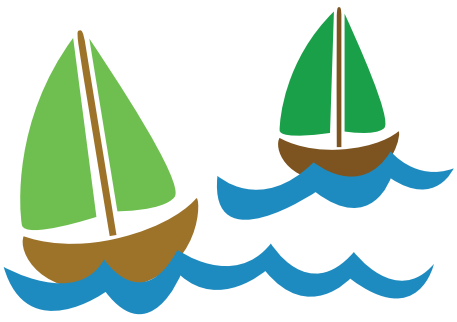
What color/s does the ocean reflect?

The ocean reflects the color blue.

What color/s does the ocean absorb?

The ocean absorbs all the colors of the spectrum except the color blue.

When the sun's light hits the ocean, the red, orange, yellow, green, indigo and violet rays are absorbed so that we can't see them! Only the blue light is reflected. The ocean itself isn't really blue; we're just seeing the reflected blue light.



Answer Sheet

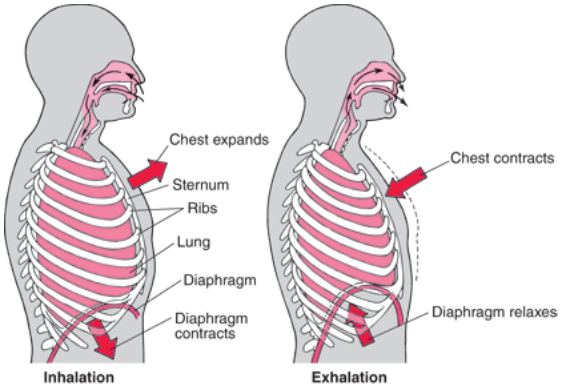
WHY AND HOW

Why do we hiccup?

The often annoying hiccup happens when our diaphragms get upset.

The diaphragm is a muscle at the bottom of the rib cage that helps pull air into our lungs when we breathe. Every once in a while, the diaphragm gets irritated and starts pulling air into the lungs the wrong way. We experience this as a hiccup.

Eating too quickly, drinking cold beverages, and swallowing air are just a handful of ways the diaphragm can get upset enough to cause hiccups. In other words, the diaphragm can be kind of sensitive.



There are lots of "home remedies" that people use to get rid of the hiccups. Lots of them are silly.

Do you think any of these methods actually work? Why or why not?

Eat a spoonful of sugar.

Drink water from the opposite side of the glass.

Chug a glass of water.

Hold your breath.

Get SCARED!

Cover your ears.

What methods do you use to cure your hiccups?

QUESTION & ANSWER:

Hiccups are caused by the involuntary contraction of what muscle?

diaphragm

Write down some ways that the diaphragm can be irritated.

eating too quickly, drinking cold beverages and swallowing air

Answer Sheet

WHY AND HOW

Why do people blush?

When some people get embarrassed, their cheeks turn red. We call this blushing, and it also can occur when a person is anxious or angry.

The science behind blushing is pretty simple: your body sends extra blood to your face which causes your cheeks to redden. The reason this happens is not so clear. Scientists have suggested that our bodies blush to reveal how we really feel. Next time you're anxious to get in a game or embarrassed that you dropped your ice cream on the floor, your cheeks just might give you away!

Did you know that some people are afraid of blushing? The fear of blushing is called erythrophobia.

Why do you think people suffer from erythrophobia?

QUESTION & ANSWER:

What causes your cheeks to redden?
It is when the body sends excess blood to your face.

What is a possible reason behind blushing?
Blushing occurs when a person is anxious or angry.

What is erythrophobia?
It is the fear of blushing.

Answer Sheet

WHY AND HOW

Why do cats purr?

Cats purr for the same reason that humans sigh, smile and sing. It's a communication tool that means different things at different times.

A cat's purr can be broken down into three separate categories: the happy purr, the friendly purr and the reassuring purr.

The happy purr is the most popular purr. When you scratch a cat behind the ears, the purr signals the cat's own comfort and enjoyment. The friendly purr often happens when a cat is approached by a human he likes or another cat. This second type of purr simply communicates that the cat welcomes the visitor. Lastly, cats use the reassuring purr when they are afraid. Scientists believe that purring calms the cat, in the same way humans sometimes sing when they're nervous to make them feel better.

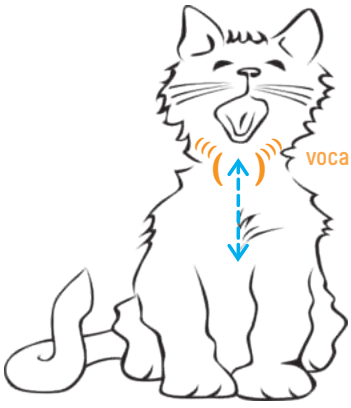
Identification:

Based on the reading, identify what type of purr cats make in these situations:

happy purr	a cat being scratched
friendly purr	two cats walking towards each other
reassuring purr	a cat at a vet
happy purr	when a cat gets a treat
reassuring purr	a mother cat giving birth
reassuring purr	when approached by a stranger

Mechanics behind a purr:

Purrs involve various muscles in a cat's body. The larynx, or voice box, and diaphragm play key roles in the mechanics of purring.



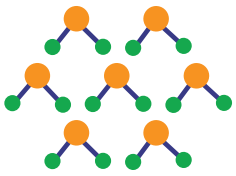
Answer Sheet

WHY AND HOW

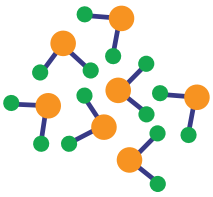
Why does ice float?

Even though ice is the solid form of water, it actually has a lower density than its liquid counterpart.

When water freezes, its molecules actually spread out a bit and organize themselves into crystal arrangements. Water molecules, on the other hand, have tightly packed molecules. So when you put an ice cube into a glass of water, the ice cannot sink to the bottom of the glass because the molecules in the water are too dense.



ice molecules



cold water molecules

ACTIVITY:

Try your own experiment. You know that ice cubes float in water, but what about other liquids? Record your findings here.

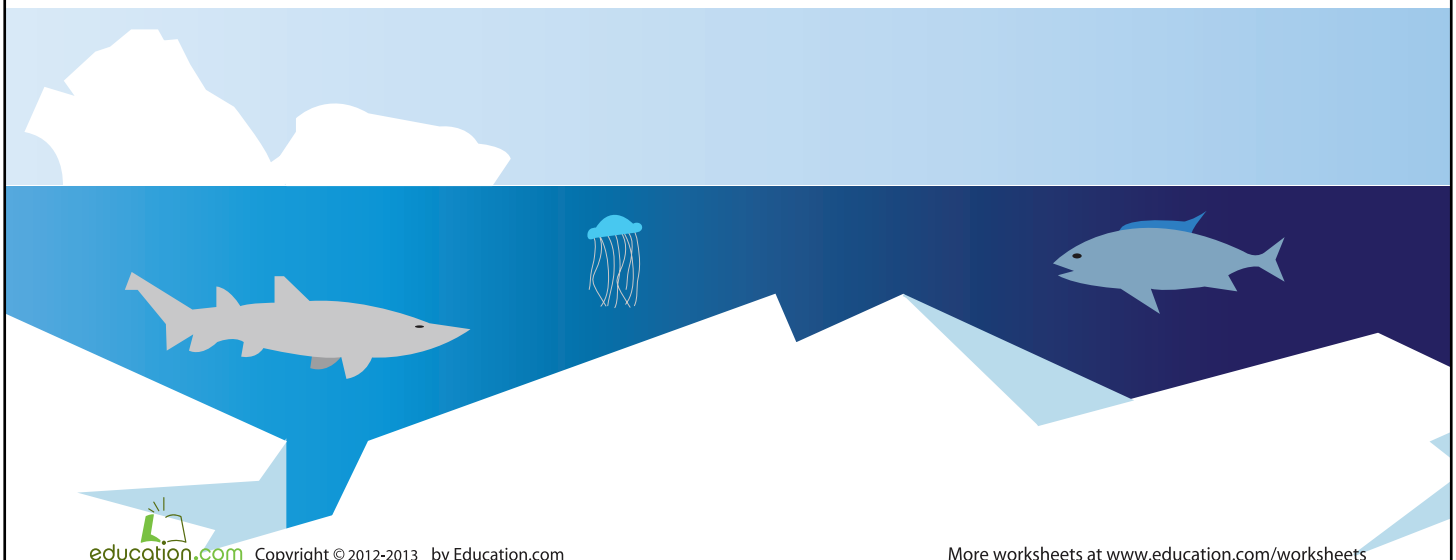
Olive Oil

Vegetable Oil

Nail Polish

Oil Paint

Maple Syrup



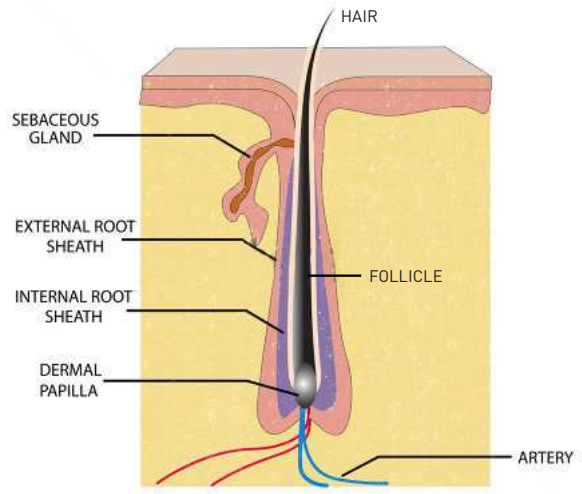
Answer Sheet

WHY AND HOW

Why does hair turn gray?

To find out why hair turns gray we have to investigate *hair follicles*.

Hair follicles are tubes of tissue that surround the roots of each hair strand. Inside the hair follicles are *pigment cells* that determine if our hair is red, brown, black or blond. As people age, their hair follicles start to die. Without enough pigment cells from these dying hair follicles, hair gradually turns gray or white.



QUESTION & ANSWER:

What are the tubes of tissue that surround the roots of each hair strand?

Hair Follicles

Located inside the hair follicles, what determines the color of our hair?

Pigment Cells

What helps determine whether a person's hair turns gray or white?

Genes

There isn't a certain age when every person starts getting gray hair. It depends on each individual's *genes*. A good way to predict when or if someone you know might get gray hair is to look at that person's parents or grandparents.

Answer Sheet

WHY AND HOW

Why does the earth spin?

The Earth spins because there is nothing in its way to stop it!

Long before our planet was a solid sphere, there was just a mass of dust and gas. Earth was formed when all this matter began to spin. That's how most planets and stars are formed!

Thousands of years later, the spinning cloud of dust and gas became our planet, and thanks to our position in the Solar System, neither the sun nor the moon had the power to slow Earth's rotation enough to halt it completely.

QUESTION & ANSWER:

What was Earth before it became a solid sphere?

A mass of dust and gas

How was Earth formed?

It was formed from the spinning cloud of dust and gas.

Can the sun and the moon stop Earth from spinning?

No

Imagine the Earth did not spin. How would this affect your life?

★ Remember that the Earth's rotation is responsible for the sun rising and setting. If the Earth did not spin, parts of our planet would spend half a year in darkness and another half a year in full sunlight.

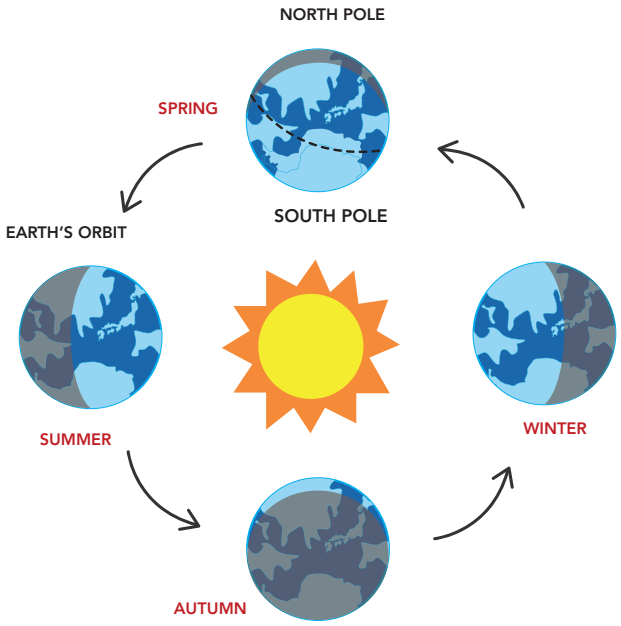
Answer Sheet

WHY AND HOW

Why is there a leap year?

The month of February usually has 28 days, but every four years it has 29. To understand this we have to understand what a year is.

One year is supposed to match the time it takes for the Earth to orbit the Sun. However, the match isn't perfect. Our year equals 365 days, but it takes Earth about 365 ¼ days to complete its orbit. That little fraction may seem insignificant, but every four years it adds up to a complete day. We give that extra day to February and call it leap year.



QUESTION & ANSWER:

How long does it take the Earth to complete its orbit?

It takes the Earth 365 ¼ days to complete its orbit.

How often does a leap year occur?

A leap year occurs every 4 years.

What is a person born on February 29th called?

A leap year baby

A leap year consists of how many days?

It consists of 366 days as opposed to a regular 365 days.

Why is it called leap year when we're actually adding a day? It seems like it might make more sense to call it some thing like plus day or add day. We call it leap year because the addition of that one day effectively leaps the rest of that year forward by 24 hours.

A "leap year baby" is someone who is born on the last day of February in a leap year. Would a leap year baby age differently than everyone else?

Answer Sheet

WHY AND HOW

How is honey made?

Without bees we wouldn't have any delicious honey to sweeten our toast or tea. Honey bees work tirelessly to produce honey in a multi-step process that is both wonderful and a bit disgusting.

First, honey bees have to use their tongues to slurp out the pollen and nectar from flowers. They actually digest all of this, allowing the pollen and nectar to mix with the proteins and enzymes of their stomachs. When the honey bees return to their hive, they regurgitate–a fancy word for throwing up this pollen/nectar/protein /enzyme mix into a beeswax comb.

The bees then flap their wings to help the mixture thicken before covering the combs with a wax cap.

After beekeepers take out these honeycombs, all they need to do is process and clean out the combs a bit. The odd combination of flower parts and bee proteins is now honey!

Can you help our bee friend find his mate?

Answer Sheet

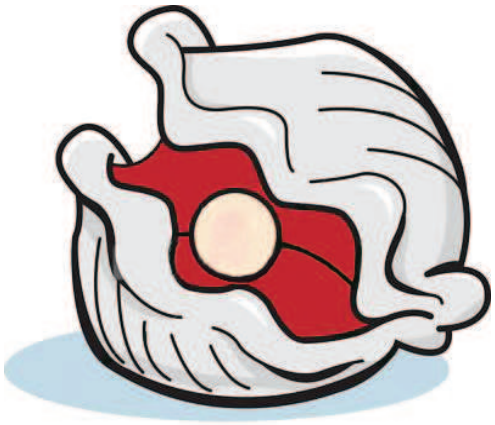
WHY AND HOW

How is a pearl formed?

Have you ever had a small piece of dust get in your eye? It was probably annoying, but when an oyster gets dust inside its shell, it turns the dust speck into a pearl!

Oysters try and protect themselves from unwanted visitors by covering any outside dust particles with a mineral substance called nacre. Layers and layers of nacre eventually form a pearl.

Natural pearls form when a piece of dust gets into an oyster's shell by chance. Cultured pearls are the result of humans forcing a dust particle into an oyster's shell. Pearls are so popular today that a lot of people don't want to wait for a pearl to form naturally!



QUESTION & ANSWER:

How do oysters protect themselves?

They protect themselves by covering any outside dust particles with a mineral substance called nacre.

How do natural pearls form?

They form when a piece of dust gets into an oyster's shell by chance.

How do cultured pearls form?

They form when humans force a dust particle into an oyster's shell.

Can you think of anything else in nature that starts off small and plain, but after a long time turns into something beautiful?

Answer Sheet

WHY AND HOW

How is a star born?

A star is a big ball of plasma that is formed from a cloud of dust and gas.

Sometimes particles of dust and gas float by each other in space without anything happening. Other times gravity clumps these clouds together into compact substances. The particles begin bouncing off of each other, creating friction and heat. Eventually, the heat becomes so intense that it creates a nuclear reaction which releases a massive amount of energy and light. The resulting substance is a star.

QUESTION & ANSWER:

What is a star?

It is a big ball of plasma that is formed from a cloud of dust and gas.

What gets released after a nuclear reaction involving intense heat?

A massive amount of energy and light gets released.

Did you know that celebrities and actors are often called stars?

Why do you think we compare famous people to burning lights in the sky?