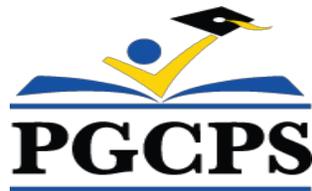


Elementary ESOL
Summer Enrichment Packet
For
Rising 5th and 6th Graders



PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS
Division of Academics
Department of Curriculum and Instruction



Week 1

Math: Classifying Quadrilaterals

- **Review** the vocabulary chart on quadrilaterals
- **Determine** whether each statement is always true, sometimes true, or never true

Science: Systems of Survival

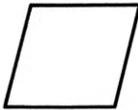
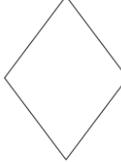
- **Read** the story “Amazing Ants”
- **Match** the vocabulary words to the definitions using the glossary for the story
- **Write** an acrostic poem about the ways that ants survive and live

Social Studies: Three Branches of Government

- **Read** the passage about the Three Branches of Government
- **Complete** the crossword puzzle using the word bank

Classifying Quadrilaterals

Review the chart below to learn about different types of quadrilaterals. Color each circle according to whether the statement is always true, sometimes true, or never true.

Trapezoid	Parallelogram	Rhombus	Rectangle	Square
				
<ul style="list-style-type: none"> • 1 pair of parallel sides • 2 sides of equal length • No right angles 	<ul style="list-style-type: none"> • Opposite sides are parallel • Opposite sides are equal • No right angles 	<ul style="list-style-type: none"> • All sides are equal length • Opposite sides are parallel • No right angles 	<ul style="list-style-type: none"> • Opposite sides are parallel • Opposite sides are equal • 4 right angles 	<ul style="list-style-type: none"> • All sides are equal • All sides are parallel • 4 right angles



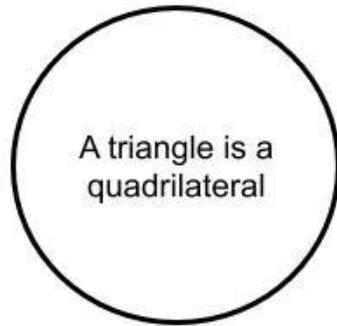
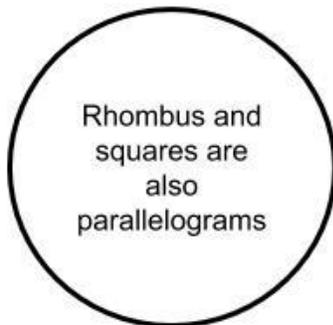
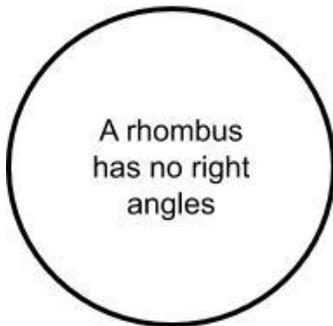
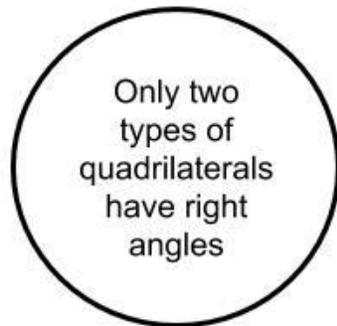
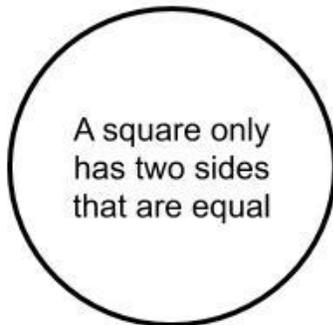
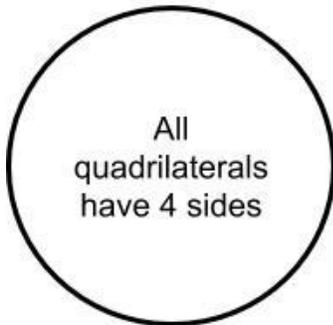
Always True= Green



Never True= Red



Sometimes True= Yellow





Awesome Ants

Written by Rus Buyok

www.readinga-z.com

Focus Question

What makes ants awesome?

Words to Know

antennae	insects
colony	species
communicate	vibrations

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 Level N Leveled Book
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Correlation

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Ants are always on the move.

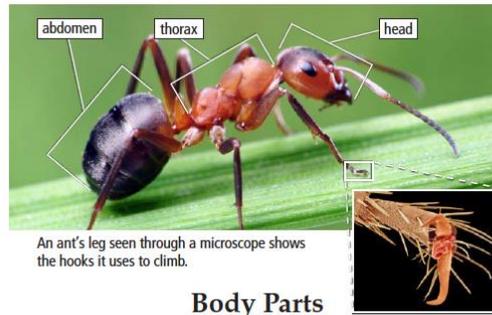
A Little History

You've seen them marching through grass and across sidewalks. You may have even seen them crawling over your kitchen counter. We're talking about ants—tiny, strong, awesome ants.



This fossil of a giant male ant is over 49 million years old.

Ants are about 100 million years old. They were crawling around under the dinosaurs! Between then and now, they've changed a lot. Today, over 10,000 **species** of ants live on every continent except Antarctica. They have been able to survive so long because of their bodies and how they live.

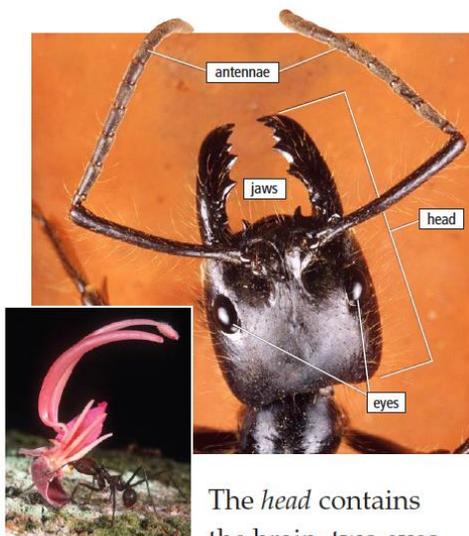


An ant's leg seen through a microscope shows the hooks it uses to climb.

Body Parts

Like all **insects**, ants have six legs and three body parts. The back part of their body is the *abdomen*. This part holds the heart and stomachs. Some ants have stingers that they use to protect themselves.

Their three pairs of legs attach to the middle part, called the *thorax*. Each leg has little hooks that allow ants to climb almost anything. Ants can even hear with their legs by feeling **vibrations** through the ground.



The **head** contains the brain, two eyes, **antennae**, and jaws. The jaws open and close like scissors. They are used for cutting and carrying things. Ants can lift more than twenty times their own weight. Ants also have other mouthparts for chewing food and drinking.



Ants use their antennae to taste a grape.

The two eyes are each made up of many smaller eyes. Even though ants have so many eyes, they can't see very well. Instead, they use their antennae to get around. The antennae are like all-in-one sense machines. Ants use them to taste, smell, hear, and **communicate** with other ants through touching. The long, thin antennae are always moving around.



Four ants use their antennae to communicate.

Let's Talk

Ants communicate with each other in three ways: touch, sound, and smell. Ants touch each other with their antennae in different ways to send different messages. They can also make noises to communicate by rubbing their legs together or on their bodies.

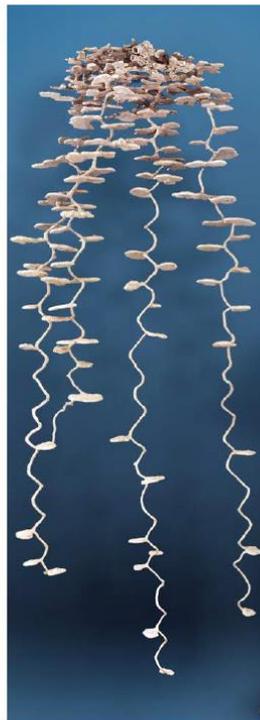


Leaf-cutter ants carry leaves that weigh far more than the ants back to their colony.

The main way ants communicate is by smell. They release chemicals that other ants can smell long after the first ant is gone. Different smells send different messages. For example, a crushed ant releases chemicals that attract other ants. The chemicals also make the other ants attack anything nearby that might be a danger. An ant that has found food will lay down a trail of chemicals for other ants to follow. The trail allows them to find the food and return to the **colony**.

One Big, Happy Family

Ant colonies are filled with activity. Usually built underground, they have many different rooms, which all have different uses. Some rooms store food, while others are used to care for the young. Colonies even have rooms for ants to relax in.



This cast shows the upper part of a large ant colony. Scientists think this colony went over 12 meters (39 ft) into the ground.



Soldier ants are usually much larger than worker ants.

Within the colony, every ant has a job. Worker ants and soldier ants find food and protect the nest. These are usually the ants you see above the ground. Other ants build



What About the Boys?

Male ants have only one purpose in most colonies: to mate with the queen. Once they've done their duty, most male ants simply die.

the nest, take care of the young, and do other jobs. All these ants are female, but only one is allowed to lay eggs: the queen. In other words, all the ants in a colony are related.



Many smaller ants spend their lives caring for the queen.

The Queen

The queen is the leader of the colony. The largest of all the ants, queens are egg-laying machines. Some queens can lay thousands of eggs every day. They can also live longer than most other insects—over twenty-five years.

I Can Fly!

Some young queens have wings that they use to fly off and start new colonies. The wings fall off when the queens start laying eggs. Some males can also fly. When they land near a colony, worker ants rip the wings off. Then they rush the male to the queen so the two can mate before the male dies.



Let's Go Floating

Not even water can stop some ants. They climb on top of each other and link their legs until they form a raft or bridge made of their own bodies.

Yep, Ants Are Awesome

Ants may be small, but they can do awesome things. Thousands or millions of ants working together can build bridges or float across rivers. They can overpower animals hundreds of times their own size for food.



A trail usually means the ants are moving to a new home—or they've found something very tasty.

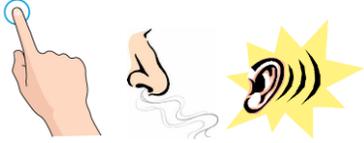
So the next time you come across a trail of ants, stop and watch or, better yet, follow them. When you see what these little gals are capable of, you'll understand just how awesome they are.

Glossary

- antennae** (*n.*) the thin feelers found on the heads of some animals that help them touch and smell (p. 7)
- colony** (*n.*) a group of animals that live together; a place where a group of ants or certain other social insects live (p. 10)
- communicate** (*v.*) to share information using pictures, language, or other means (p. 8)
- insects** (*n.*) small animals with six legs, three body parts, and usually two sets of wings (p. 6)
- species** (*n.*) groups of living things that are physically similar and can reproduce (p. 5)
- vibrations** (*n.*) small, rapid shaking motions (p. 6)

Ants Vocabulary

Cut out the vocabulary cards below. Can you match each word with the definition and picture/sentence? Use the glossary and the story to help you.

Antennae	Thin feelers on the heads of insects that help them touch and smell	 <p>The ant has _____.</p>
Colony	A place where animals or insects live together as a group	 <p>Ants live together in a _____.</p>
Communicate	A way of sharing information- ants use touch, smell, and sound to communicate	 <p>Ants _____ with each other.</p>
Species	A group of living things that are physically similar and can reproduce	<p>There are over 10,000 ants _____ in the world.</p>
Survive	To stay alive and continue living	<p>Ants _____ because of their bodies and how they live.</p>

Ants Acrostic

Think about what you learned about ants and the ways that they live and survive. Use what you learned to create an acrostic poem about ants. See the example below about worms.

<p>Wiggly Organs are few Reproduce through eggs Most eat dead plants Soil living</p>

A
M
A
Z
I
N
G

A
N
T
S

The Three Branches of the US Government

There are three Branches of Government in the United States. Each branch has a special role in the government. The three branches were decided by the writers of the constitution to ensure that no part of the government had too much power.

The **Legislative Branch** is responsible for making laws. It includes the Senate and the House of Representatives. The **Senate** is made up of 100 senators, two from each state. The Senate also approves nominations by the President to Cabinet, Supreme Court, federal courts and other positions. Senators are elected by the people of their state.

The **House of Representatives** is made up of 435 elected officials elected from each of the 50 states. The number of representatives for each state is decided by how many people live in the state. Representatives are also elected by the people in their state. Together, the House of Representatives and the Senate are called **congress**. Both the House and the Senate must pass bills for them to become laws.

The **Executive Branch** enforces the laws of the country. It includes the **President** as the leader of the country, as well as the Vice-President. The President is elected by the entire country. The President approves and carries out laws passed by the Legislative Branch. The President can also **veto**, or reject, a law that has been passed. The President also appoints or removes **cabinet** members. Cabinet members offer advice on running the country. The leader of the country also negotiates treaties, acts as head of state for the country, and is the commander in chief of the military.

The **Judicial Branch** oversees the court system. It includes the **Supreme Court**, made up of nine judges. Supreme court judges are nominated by the President, and approved by the Senate. The Supreme Court's job is explaining the meaning of the Constitution and laws and deciding whether something is constitutional or unconstitutional, meaning it is permitted or not permitted. They often decide new ways of understanding a law, decide court cases, and settle court cases between two or more states.

The three branches of the government are expected to work together, cooperate, and do what is best for the citizens of the country. Each person in the government is elected by its citizens who must trust the leaders to manage the country as best as possible.



3 BRANCHES of U.S. GOVERNMENT



 **Constitution**
(provided a separation of powers)



Legislative
(makes laws)



Congress



Senate



House of Representatives



Executive
(carries out laws)



President



Vice President



Cabinet



Judicial
(interprets laws)



Supreme Court



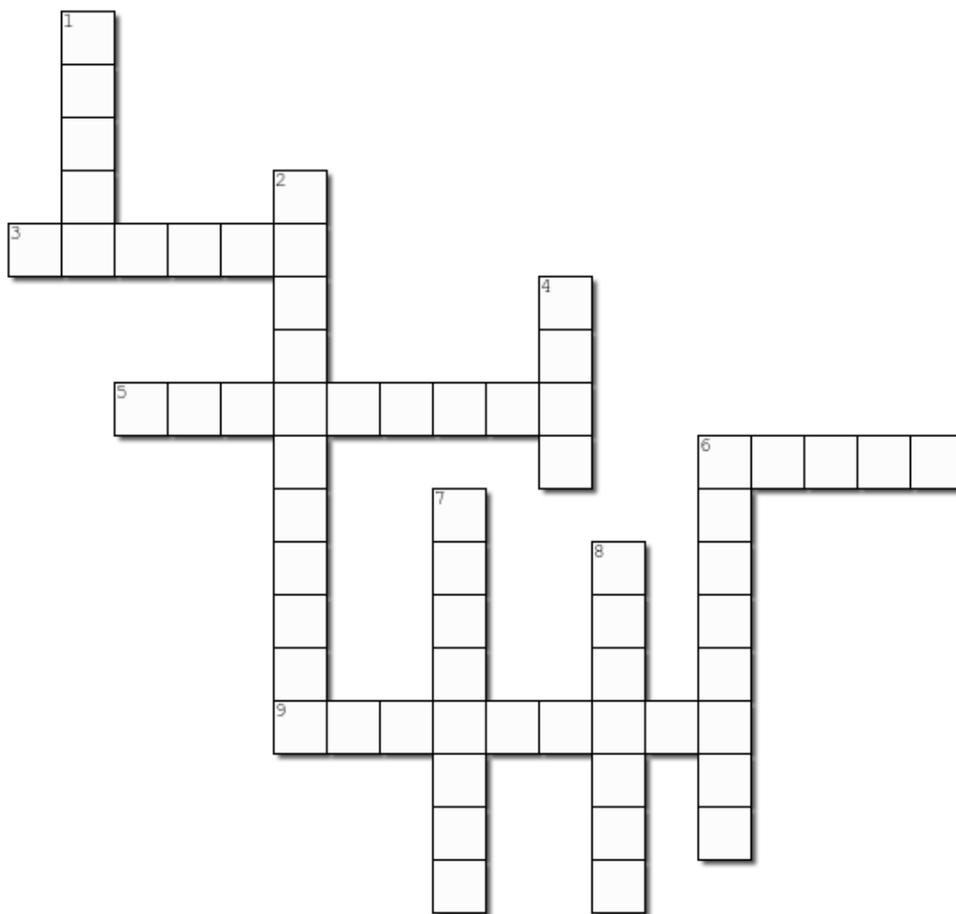
Other Federal Courts

Brought to you by



Three Branches of US Government

Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

Judicial

House

Court

Veto

Senate

President

Legislative

Congress

Cabinet

Executive

Across

3. The _____ is part of congress, with two senators from each state.
5. The leader of the country and head of the executive branch is called the _____.
6. The Supreme _____ is made up of nine judges.
9. The _____ branch enforces the laws of the country.

Down

1. The _____ of Representatives is part of Congress.
2. The _____ is responsible for writing and passing new laws.
4. The President can reject, or _____ new laws.
6. Together, the House of Representatives and the Senate are called _____.
7. The _____ branch oversees the court system.
8. The _____ gives the President advice on running the country.

Week 2

Math: Measurement

- **Read** the story “How We Measure”
- **Complete** the vocabulary chart using the glossary for the story
- **Match** each country with the measurements they use based on the story

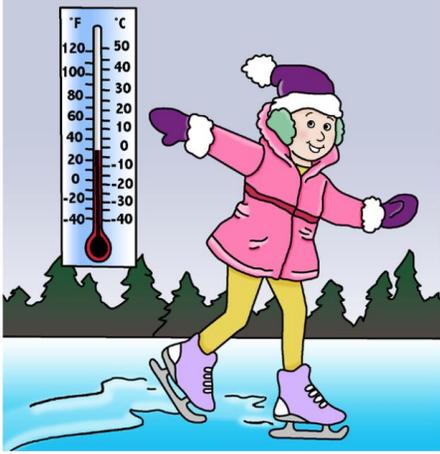
Science: States of Matter

- **Read** the article “States of Matter”
- **Classify** items based on whether they are liquid, solid, or gas

Social Studies

- **Read** “How a Bill Becomes a Law”
- **Complete** the vocabulary activity

How We Measure



Written by Dori Butler
Illustrated by David Schimmell

www.readinga-z.com

How We Measure
Level L Leveled Book
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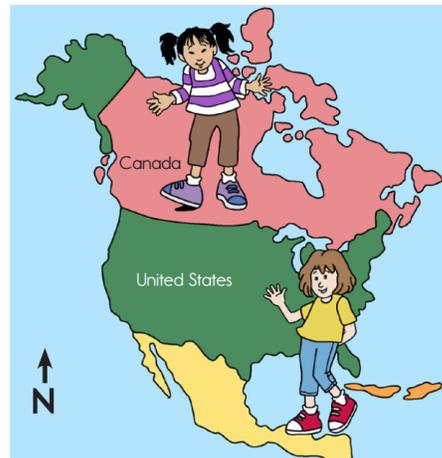
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Correlation

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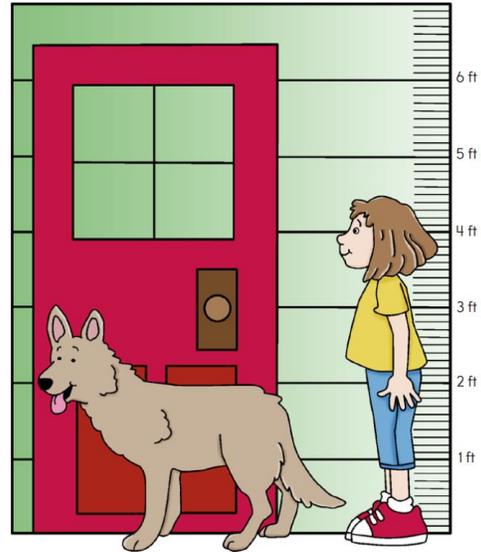
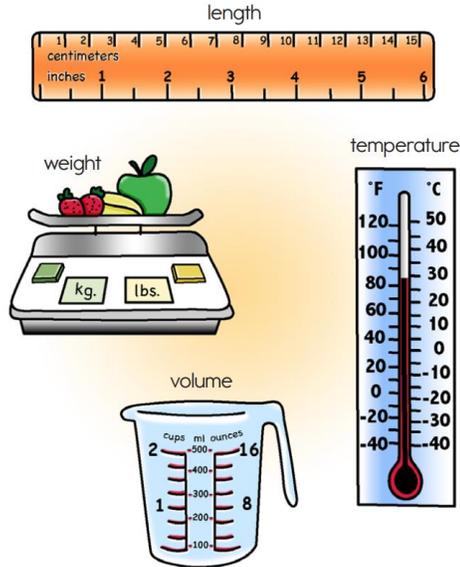


Introduction

Lisa and Magda are pen pals. Lisa lives in the United States, and Magda lives in Canada.

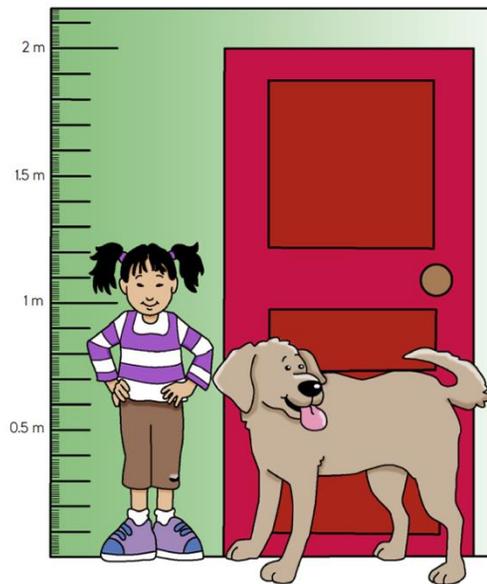
A lot of things are the same in the United States and Canada. But many things are different.

One difference is the **system** people use to **measure** things. Canada uses the **metric** system to measure things. The United States uses the **English** system.



How Tall Are You?

Lisa measures her **height** in feet and inches. There are 12 inches in one foot. Lisa is 4 feet, 5 inches tall.



Magda measures how tall she is in meters. There are 3.28 feet in one meter. Magda is 1.23 meters tall (or 123 centimeters tall).

How Much Do You Weigh?

Lisa measures how much she **weighs** in pounds and ounces. There are 16 ounces in one pound. Lisa weighs 75 pounds, 2 ounces.

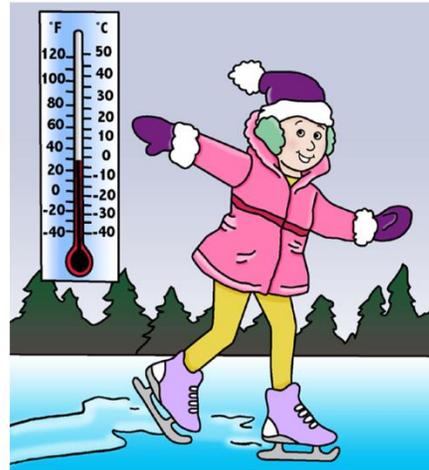


3 ketchup packets = 1 ounce

2 chocolate bars = 90g = 0.2 pounds



Magda measures how much she weighs in kilograms. There are 2.2 pounds in one kilogram. Magda weighs 26 kilograms.



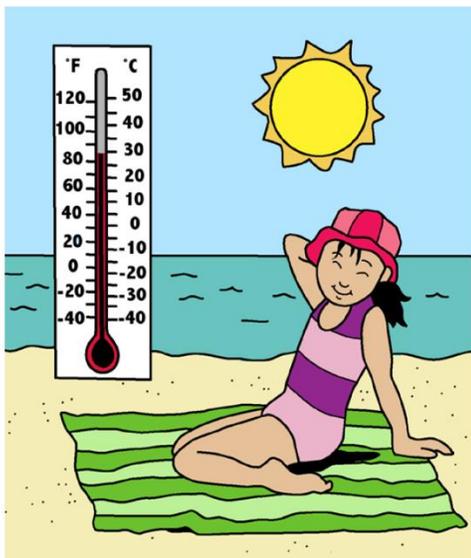
What Is the Temperature?

Lisa measures the **temperature** in degrees Fahrenheit.

When it is 28 degrees Fahrenheit outside, Lisa wears her heavy coat and goes ice-skating. It's winter!

Magda measures the temperature in degrees Celsius.

When it is 28 degrees Celsius outside, Magda wears her bathing suit and goes to the beach. It's summer!



Making Cookies

When Lisa makes cookies, she measures the flour, butter, and sugar in cups.

She measures the baking soda, salt, and vanilla in teaspoons.





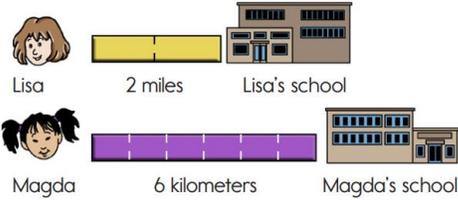
Magda measures the flour, butter, and sugar in grams.

She measures the baking soda, salt, and vanilla in milliliters.

How Far Is It to School?

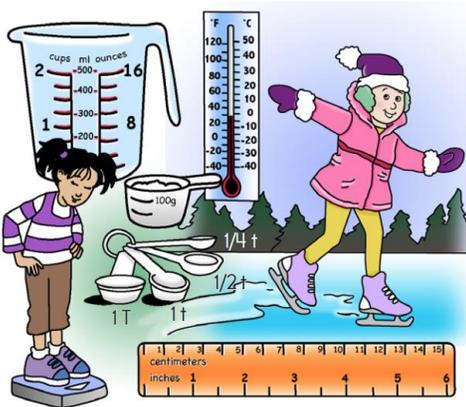
Lisa lives 2 miles from her school. Magda lives 6 kilometers from her school. There are 0.62 miles in one kilometer.

Who lives closer to her school, Lisa or Magda?



Math Minute

0.62 miles = 1 kilometer,
_____ miles = 6 kilometers



Conclusion

Lisa uses the English system to measure things. Magda uses the metric system.

Both girls can measure height, weight, temperature, cookie ingredients, and **distance**. They just do it differently.

Glossary

- distance** the amount of space between things or places (p. 15)
- English** from England (p. 5)
- height** how high the top of something is from the ground (p. 6)
- measure** to find the number that tells the size of something (p. 5)
- metric** the system that measures things in groups of ten (p. 5)
- system** a group of things or ideas that work together (p. 5)
- temperature** how hot or cold something or someplace is (p. 10)
- weights** having a certain amount of heaviness (p. 8)

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Activity #1: Measurement Vocabulary

Use the glossary in the story to complete the vocabulary chart.

Word	Definition	Sentence	Picture
Measure	To find the number that tells the size of something.	I want to <u>measure</u> my height.	
Weight			
Height			
Distance			
Temperature			
System			
Metric			
English			

Activity #2: Measurement Match

Cut out the measurement words below. Match the measurement to the country that uses it. Use the story "How We Measure" to help you.

UNITED STATES	CANADA

Meters	Ounces	Pounds	Centimeters
Kilometers	Feet	Pounds	Fahrenheit
Grams	Miles	Celsius	Cups

States of Matter

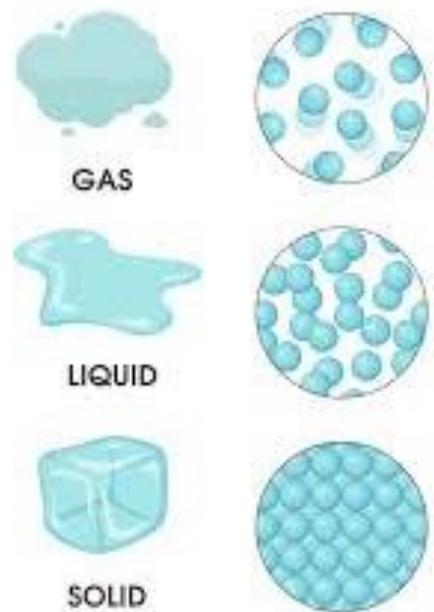
Matter is everything that we come across in our lives, like the air you breathe, the clothes you wear, the water you drink– literally everything! In fact, did you know that you are made of matter too?

When we talk about states of matter, it's important to know that all matter is made up of tiny **molecules** that we can't see. Molecules are made up of two or more **atoms**. Atoms are the tiny building blocks which make up substance. Everything you see is made of molecules and atoms.

When we talk about the states of matter, we mostly talk about solids, liquids and gases. **Solids** are objects that keep their own shape most of the time. Examples of solids are cars, books, tables and clothes. In solids, the molecules do not move around very much.

Liquids do not have their own shape but can take the shape of the container they are in and they can flow at a given temperature. Examples of liquids are tea, water and blood. The molecules in liquids move a little more freely than in solids.

Gases are air-like substances that can move around freely or flow to fit a container and they don't have their own shape. You can put your hand through gases and you won't feel them. Molecules in gas move around freely and quickly.



Talking about states of matter

_____ is a _____ because _____.

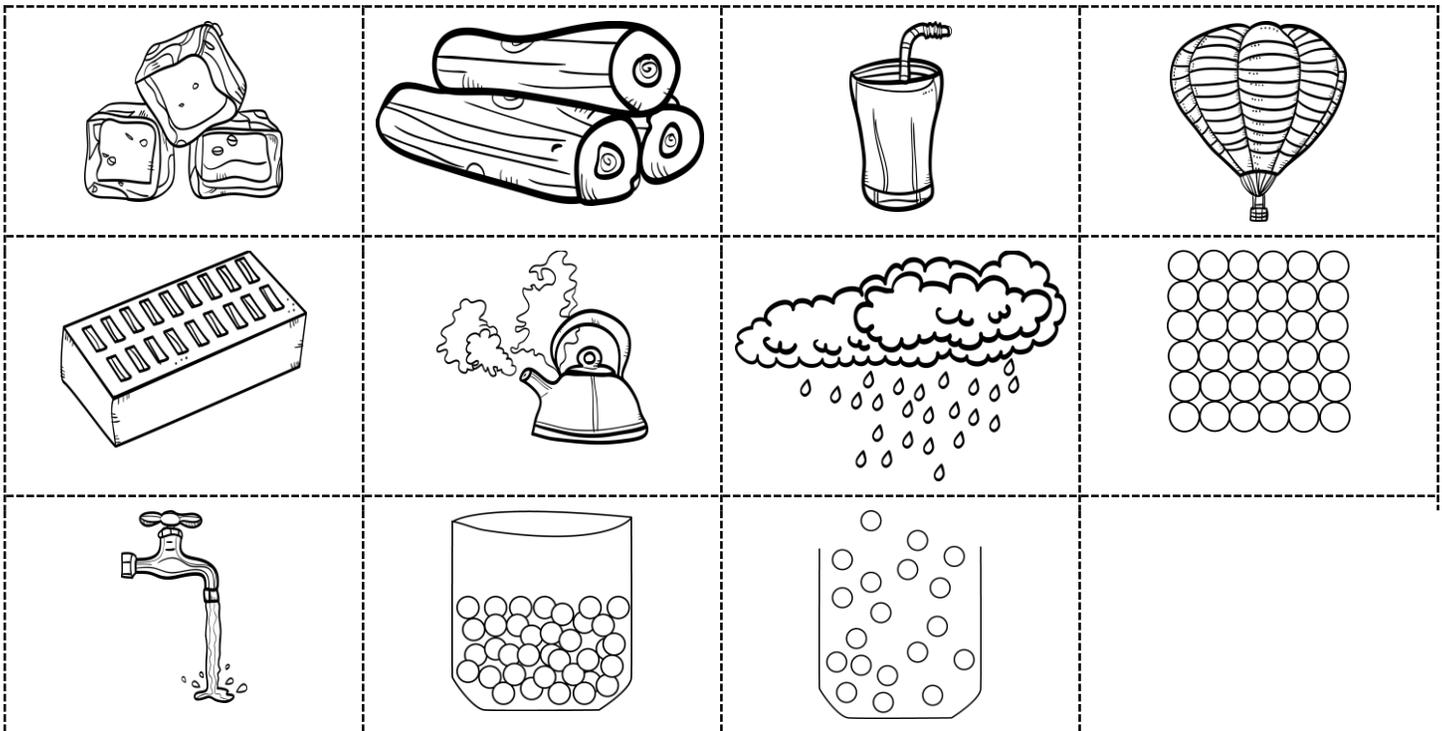
This is a _____.

I know this is a _____ because _____.

Classifying States of Matter

Cut out the pictures below. Classify each picture as a liquid, solid or gas and paste them into the correct column below. Use the article to help you.

Liquid	Solid	Gas



How a bill becomes law

By House.gov, adapted by Newsela staff on 01.03.17

Word Count **645**

Level **660L**



President Barack Obama speaks to Congress regarding health care reform on September 9, 2009. Photo: Whitehouse.gov

In the United States, lawmakers can be in the Senate or the House of Representatives. The Senate and the House together are called Congress. Congress works with the president to make laws for the country.

All laws begin as bills. Each bill goes on a long journey before it becomes a law.

The Bill Begins

Laws begin as ideas. These ideas may come from a Representative or from a citizen. Citizens who have ideas for laws can talk to their Representatives to discuss their ideas. If the Representatives agree, they write the ideas into bills.

The Bill Is Proposed

After a Representative has written a bill, they find other Representatives to help support it. The Representative who supports a bill is called a sponsor. After a bill has a sponsor, it is ready to be introduced.

The Bill Is Introduced

Only Representatives can introduce bills. When a bill is introduced, it is given a number that begins with H.R. A reading clerk, an employee of the House of Representatives, then reads the bill to all the Representatives. Then the bill is sent to one of the House standing committees.

The Bill Goes To Committee

Each House committee is made up of several Representatives. They are experts on different topics. When a bill reaches committee, the members review and study it. They may make changes to it. Then they vote on whether or not to send it back to the House floor.

The Bill Is Sent

When the committee has approved a bill, it is sent to the House floor. Then the bill is ready to be debated by other Representatives.

The Bill Is Debated

When a bill is debated, Representatives explain why they agree with it or not. Then a clerk reads the bill out loud. The Representatives suggest changes. When all changes have been made, the bill is ready to be voted on.

The Bill Is Voted On

There are three ways to vote on a bill in the House of Representatives:

1. Voice vote. This is called viva voce. The Representatives who support the bill say "aye." Those who oppose it say "no."
2. Division. The Representatives who support the bill stand up to be counted. Then those who oppose the bill stand up to be counted.
3. Recorded. Representatives record their vote using an electronic voting system. Representatives can vote yes or no. They can also say "present" if they don't want to vote on the bill. If more Representatives select yes than no, the bill passes in the House of Representatives. The bill is then delivered to the Senate.

The Bill Is Referred To The Senate

When a bill reaches the Senate, it is sent to a committee. The committee members discuss the bill. Then they send it to the Senate floor to be voted on.

Senators vote by voice. Those who support the bill say "yea," and those who oppose it say "nay." If more Senators say "yea," the bill passes in the Senate. Then the bill is ready to go to the president.

The Bill Is Sent To The President

When a bill reaches the president, he has three choices. He can:

1. Sign and pass the bill, making it a law.

2. Refuse to sign, or veto, the bill. If this happens, the bill is sent back to the House. If the House and the Senate still believe the bill should become a law, they can hold another vote on the bill. If two-thirds of the Representatives and Senators support the bill, they can override the president's veto. Then the bill becomes a law.

3. Do nothing (also known as a pocket veto). If Congress is in session, the bill automatically becomes a law after 10 days. If Congress is on vacation, the bill does not become a law.

Vocabulary

Use the article to complete the vocabulary chart.

Word	Definition	Sentence/Picture
Law	A system of rules for a country or state	It is against the <u>law</u> to steal.
Bill		
Congress		Each state elects representatives for <u>congress</u> .
Committee	A group of experts in the House of Representatives	
Veto		
Debate	Representatives explain why they agree with the bill or not	

How a Bill Becomes a Law

Use the vocabulary words to complete the paragraph below.

Word Bank

law veto bill Congress committee debate

A _____ is an idea for a law. There are many steps that a bill must go through before it can become a _____. Laws are made by _____, which is made up of the House of Representatives and the Senate. First, someone introduces a bill. Then, the bill goes to _____, so a group of experts can review, study and make changes. Next, it goes to the house floor where representatives _____ the bill. Then, it is voted on.

If the bill passes in the house, it is sent to committee, and senators follow the same steps. If the bill passes both houses of Congress, it is sent to the President. The President can choose to sign the bill and make it a law, or the President can choose to _____ the bill.

Week 3

Math: Classifying Angles

- **Review** the types of angles
- **Classify** angles by type

Science: Changes of Matter

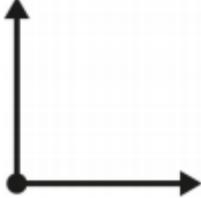
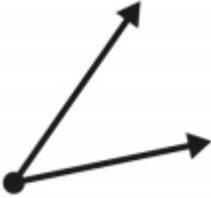
- **Review** the types of matter
- **Locate** examples of each type of matter in your house

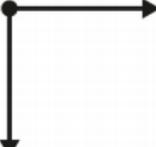
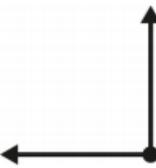
Social Studies: How a Bill Becomes a Law

- **Review** the article from last week, "How a Bill Becomes a Law"
- **Complete** the sequence chart

Classifying Angles

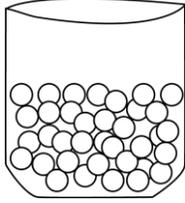
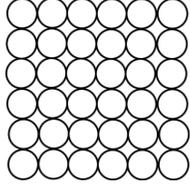
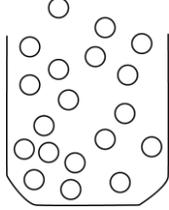
There are different types of angles in math. Look at the chart below to learn about each type of angle. Then, cut out the angles at the bottom and classify them by type.

Right Angle	Acute Angle	Obtuse Angle	Straight Angle
			
<p>An angle that forms a square corner and measures 90°</p>	<p>An angle that is smaller than a right angle- measures less than 90°</p>	<p>An angle that is bigger than a right angle- measures more than 90°</p>	<p>A straight angle measures 180° and is a straight line</p>

States of Matter

Look around your house. Find *four* examples of each type of matter you learned about. List or draw the items you find in the chart below.

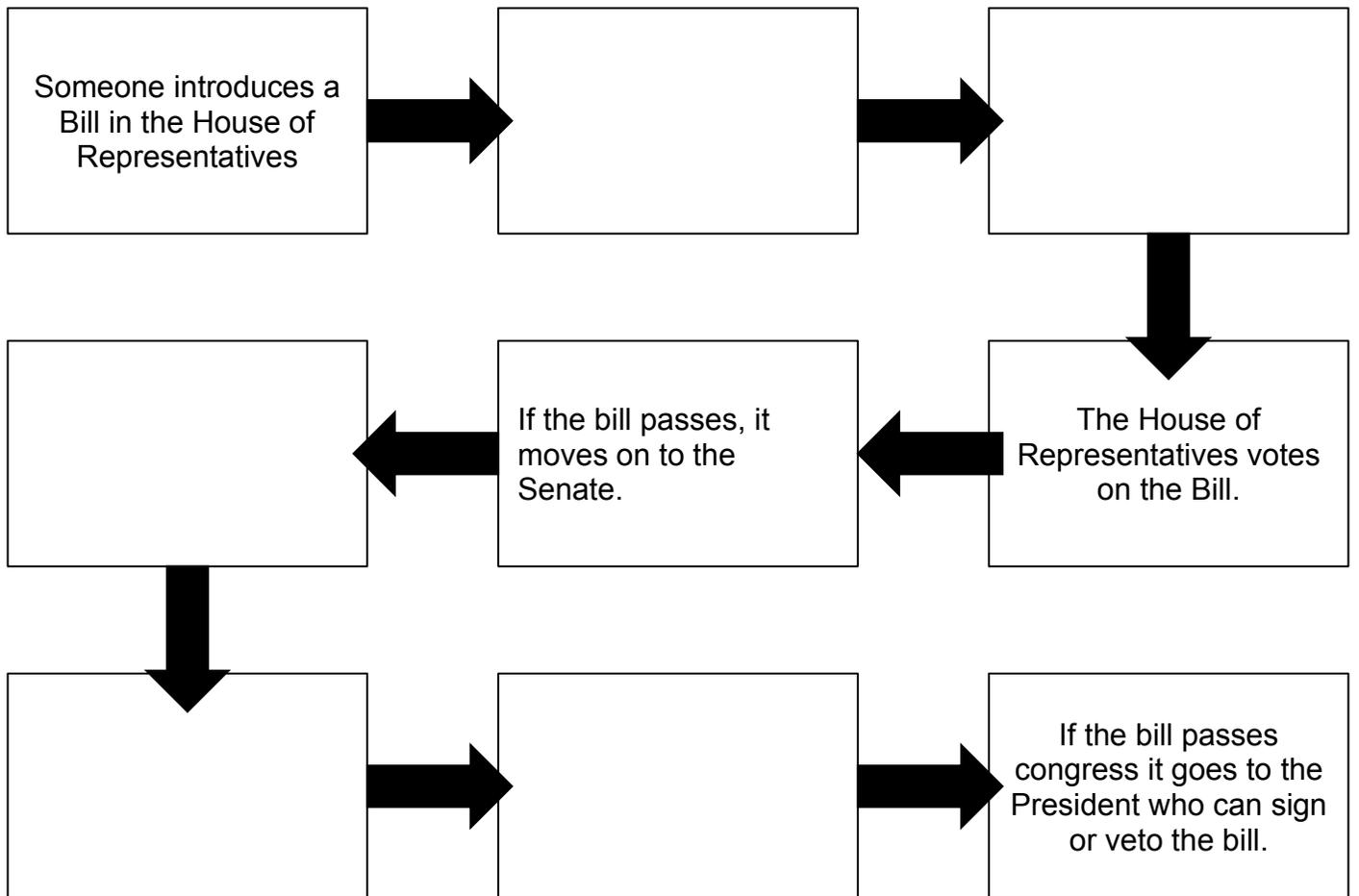
Liquid	Solid	Gas
		

How a Bill Becomes a Law

Last week, you learned about how a bill becomes a law. Use what you learned to help you fill in the sequencing chart below.

Word Bank

House of Representatives committee debate vote pass Senate
Congress President Bill law veto



Week 4

Math: Coordinate Plane

- **Review** the vocabulary chart
- **Label** the coordinate plane

Science: How Matter Moves Through the Ecosystem

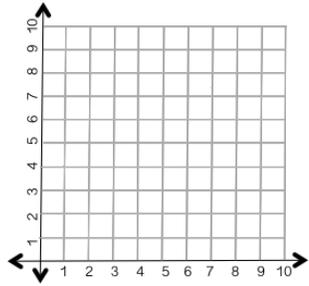
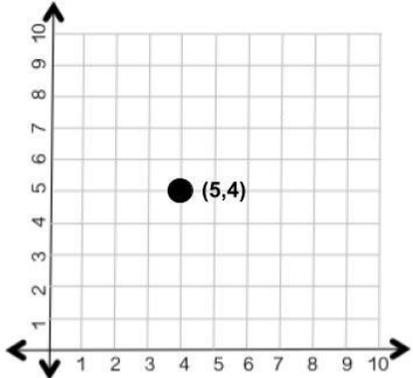
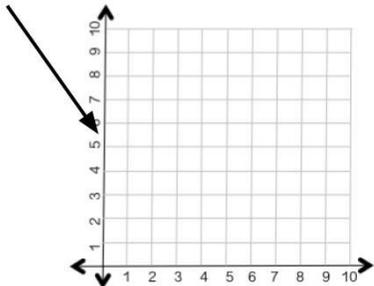
- **Read** the story “Nature Reuses and Recycles”
- **Match** the vocabulary cards using the story for help

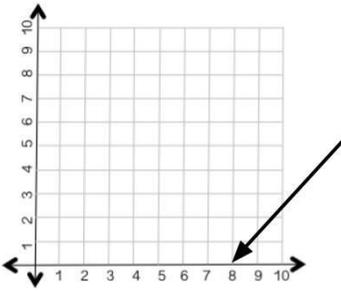
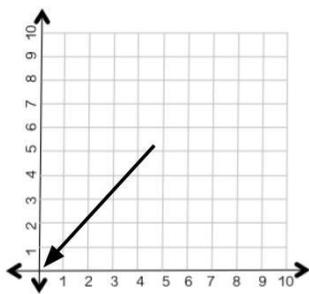
Social Studies: The US Census

- **Read** the article “Why the US Census Tries to Count Everyone”
- **Match** the vocabulary words, definitions and sentences
- **Answer** the comprehension questions

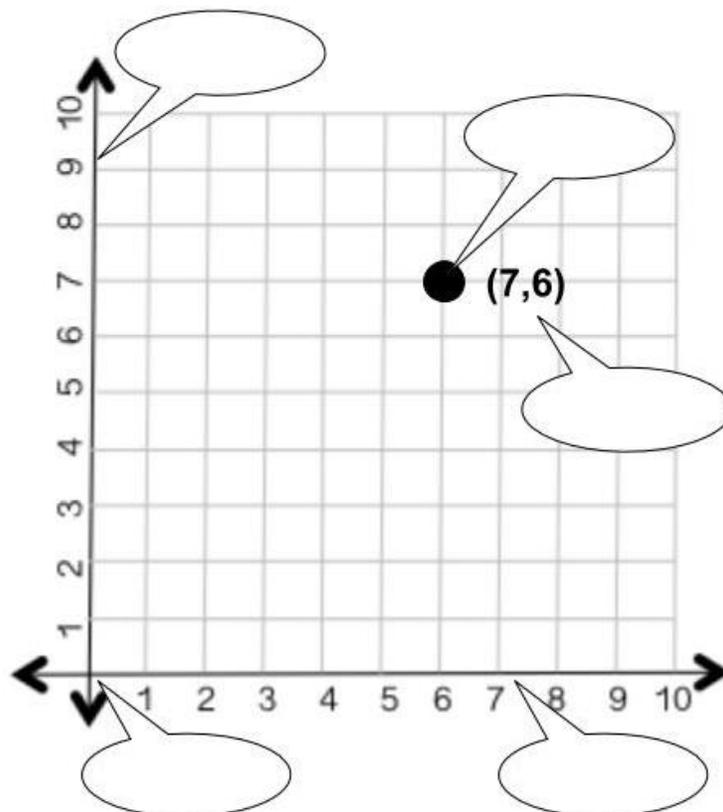
The Coordinate Plane

Study the vocabulary chart below. Then use it to label the coordinate plane.

Word	Definition	Sentence/Picture
Horizontal	Running from side to side	The table is a <u>horizontal</u> surface.
Vertical	Running up and down	The wall is a <u>vertical</u> surface.
Coordinate Plane	A two-dimensional plane formed by a horizontal axis and a vertical axis	
Coordinate	A position on the coordinate plane	
X-axis	The horizontal line of the two perpendicular number lines in a coordinate plane.	

Y-axis	The vertical line of the two perpendicular number lines in a coordinate plane.	
Ordered Pair	A pair of numbers used to locate a coordinate written in the form of (x,y) .	I can describe a coordinate using an <u>ordered pair</u> .
Origin	The point at which the x-axis and y-axis cross	

Label the coordinate Plane. Use the vocabulary chart to help you.



Nature Reuses and Recycles

A Reading A-Z Level R Leveled Book
Word Count: 898

LEVELED BOOK • R

Nature Reuses and Recycles

Connections

Writing

Create a Venn diagram comparing how people reuse and recycle with how nature reuses and recycles. Share your ideas with a partner.

Art

Find a discarded item and turn it into a piece of art. Present your artwork to your class and explain the process you went through to turn the trash into art.

Reading A-Z

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Written by Molly Wetterschneider

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Nature Reuses and Recycles



Written by Molly Wetterschneider

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Focus Question

How does nature reuse and recycle?

Words to Know

adapt	microbes
chemicals	nutrient cycle
decay	organisms
fungi	valuable
materials	

Page 3: Hyenas are skilled hunters, but also famous scavengers. They can smell a dead animal from 4 kilometers (more than two miles) away.

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Recycle, Reuse, or Trash?

Clink! Bonk! Plunk!

Those are the sounds of cans and bottles being tossed into the trash—or into the recycling bin. Items such as cans, bottles, and newspapers can be treated as trash, but they can be recycled instead. When you recycle something, the **materials** that make up the thing can be remade into a new thing.

Word Wise

The word *recycle* has two word parts: *re-* and *cycle*. The word part *re-* means “again.” The word *cycle* means to circle around and around. Just as a bicycle wheel circles around and around, recycled materials can move from your home to a recycling plant and back to your home again.



Some craft projects give used cans a new purpose.

Recycling is different from reusing. When you reuse something, you keep it in the same form and do not have to break it down and remake it. When you reuse a bottle, you might fill it up with water again, but you don’t have to reuse something for its original purpose. When you reuse a soup can, you might keep pencils in it. When you reuse newspaper, you might use it to wrap birthday presents.

After you are through reusing something, you can then recycle it or reuse it again!

Nature Reuses and Recycles

People are not the only ones who reuse and recycle. Nature does this, too, with organic materials. Organic materials are what living things are made of. By reusing and recycling organic materials in nature, living things **adapt** and survive.

Take a tree. Every part of it can be used and reused in some way by other living things. Other plants, along with insects, birds, and other animals, have adapted to use parts of the tree to help them survive, too.





Coot nest and egg



Screech owl

For instance, the original purpose of a tree's leaves is to make food for the tree to survive. But a tree's leaves also offer shade for sprouting plants. Birds line their nests with leaves. Sometimes squirrels reuse a bird's nest for their own. Some insects make homes from dead leaves. That's five uses for the same leaves!

Trees are used in other ways, too. Owls make homes in the hollows of tree trunks. Beavers cut down trees and branches to make their homes. Some animals eat bark, leaves, and fruit from trees.

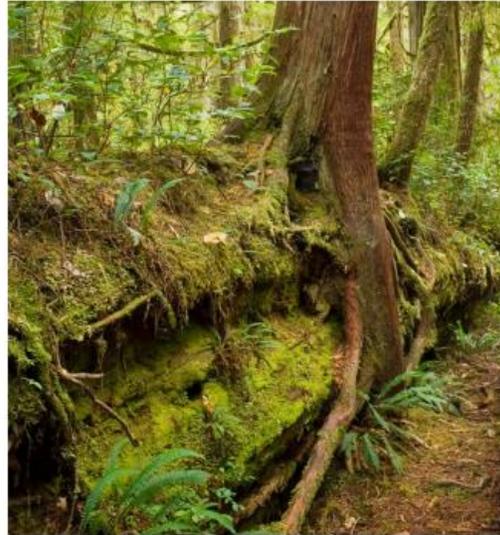
Some Living Things Eat Dead Things

When dead things *decompose*, they break down, rot, or **decay**. Imagine what would happen if nothing decomposed: dead plants and animals would just pile up! Lucky for us, several groups make sure that doesn't happen.

The first group that helps things decompose is made up of large scavengers. These are animals with backbones that feed on dead and decaying flesh. Large scavengers eat the dead flesh, then return the nutrients to nature through their waste. Nutrients give living things energy and help them grow.



The crested caracara looks like a hawk but behaves like a vulture. Here, it scavenges a dead fish.



A nurse log supports a new generation of trees in Pacific Rim National Park, British Columbia, Canada.

Trees also provide **valuable** help to other living things when they die. Fallen trees become "nurse logs" that provide food and a protected place for new trees and other plants to grow. Dead trees provide a home for animals. They can also provide food and building materials for other **organisms**.

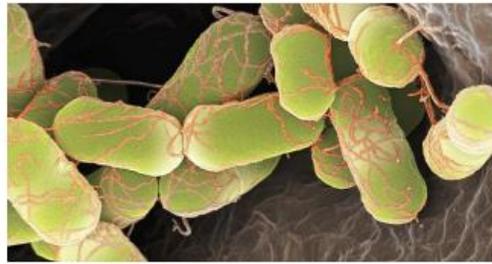
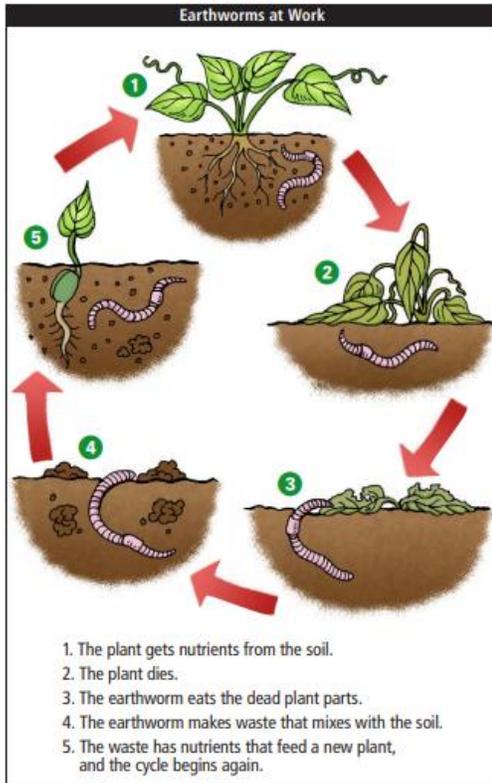
Many mammals scavenge. These include opossums, raccoons, dogs, cats, rodents, and skunks. Large mammals that hunt—such as hyenas, lions, and coyotes—also scavenge at times. Birds that scavenge include crows, ravens, and vultures.



The American burying beetle can sniff out a freshly dead animal from more than 3 kilometers (almost 2 miles) away. Once common in thirty-five U.S. states and parts of Canada, it is now an endangered species.

A second group of decomposers does not have backbones. It includes insects such as flies, beetles, and larvae (LAR-vee) that eat dead flesh.

Earthworms eat dead leaves that fall to the ground or plants that have died and begun to rot. When earthworms eat dead plants, their bodies make waste. These bits of waste look like little blobs of soil, and in fact these blobs are rich food for plants. They contain many nutrients that plants need to develop and grow. Plants take up nutrients from the soil through their roots. The natural materials move in a circle from plants to worms and back to plants again.



Microbes such as bacteria can only be seen under a microscope.

The third important group is made up of **microbes**, such as bacteria and some **fungi**. These organisms are too small to see. They feed on many dead things, from fallen trees to the guts of dead animals. These organisms break down organic materials in things that have died. This process makes **chemicals** that can be used by other living things.

Other fungi are big enough to see—mushrooms and toadstools, for instance—so these are not microbes. However, large or small, fungi break down dead things. Fungi are different from green plants, in part because they can't make their own food. Instead, fungi feed on dead plants and animals, helping them decompose.

The Nutrient Cycle

Decay can seem like an end, but it's also a beginning. That's because once something has rotted, or decomposed, the materials that made up that thing are free to make something else.

All the things we need for life on Earth are already here. They've been here since Earth began. Those things change their shape and appearance, of course. But for life here to continue, this **nutrient cycle** must keep moving. Once a living thing has died, its nutrients must cycle back for some other living thing to use.

Think of it this way: we are borrowing the things that make up our bodies. When we're done, it's time to give them back to the living. Decomposers help make that happen.



Fun Facts About Fungi

More than 1 million different species of fungi live in our world. Mushrooms are some of the most visible—you might even spot some in your backyard after a big rain. Some are delicious. Some are deadly.

Some fungi can cure disease, while others can cause it. Some can glow in the dark. And while some are too small to see, a fungus known as the honey mushroom may be the largest living thing on the planet. Believed to be 2,400 years old, it covers more than 8 square kilometers (2,000 acres).

The Problem with Plastic

What doesn't cycle through nature? Plastic. It simply piles up—in landfills, oceans, and just about everywhere else.

The Great Pacific Garbage Patch is a floating landfill of garbage in Earth's largest ocean. It's twice the size of Texas and mostly made of plastic.

Plastic takes a very long time to break down. Even when it does, plastic doesn't enter into the nutrient cycle. It isn't organic. All the more reason why humans, who create it, should also recycle it!



Think of all the ways that living things use other living and dead things. You can see that nature does an awful lot of reusing *and* recycling. People should reuse and recycle as much as they can so they create less trash. But nature reuses or recycles every part of every living thing—it leaves no trash at all. We can learn a lot from nature.

Glossary

- adapt** (*v.*) to change to fit a new or specific situation or environment (p. 6)
- chemicals** (*n.*) substances that have specific properties and can combine with other substances to make new things (p. 12)
- decay** (*v.*) to rot or break down slowly through natural processes (p. 9)
- fungi** (*n.*) living things that grow on organic material and produce spores (p. 12)
- materials** (*n.*) matter, parts, or elements that make up objects (p. 4)
- microbes** (*n.*) microscopic organisms (p. 12)
- nutrient cycle** (*n.*) a cyclical process between living organisms and their environment in which nutrients are used, broken down, and recycled through natural means (p. 14)
- organisms** (*n.*) living things (p. 8)
- valuable** (*adj.*) having value or worth; very important (p. 8)

Vocabulary Match

Cut out the vocabulary cards below. Use the story "Nature Reuses and Recycles" to help you match the words with the definitions.

adapt	to change to fit a new or specific situation or environment <i>(verb)</i>
decay	to break down slowly or decompose through natural processes <i>(verb)</i>
fungi	plural of <i>fungus</i> ; living things that grow on organic material and produce spores <i>(noun)</i>

microbe

a living thing that is so small it can only be seen with a microscope
(noun)

nutrient cycle

a cyclical process between living organisms and their environment in which nutrients are used, broken down, and recycled through natural means
(noun)

organism

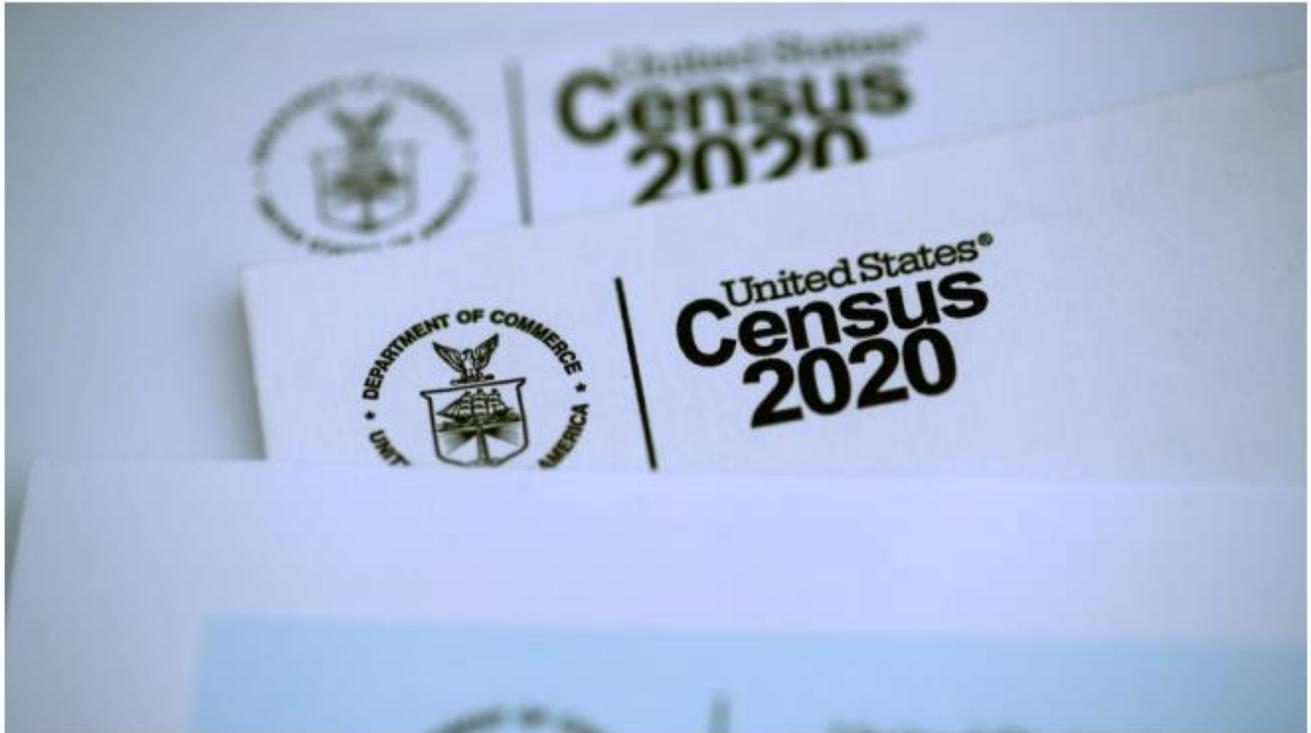
a living thing
(noun)

Why the U.S. census tries to count everyone

By Washington Post, adapted by Newsela staff on 03.31.20

Word Count **697**

Level **720L**



America, it is time to stand up and be counted.

Around March 23, a letter should have arrived where you live. The letter asks the adult in charge to complete a form called the 2020 Census. It is pronounced SEN-suss. The census is a count that is done every 10 years of everyone living in the United States. It asks who lives in a home and how they are related. It also asks their age, race and other information.

The Information Collected By The Census Is Important

This is a huge job. It is important that everyone be counted. That is because the national government uses that information to see how many seats in Congress each state should have. If a state loses population, it might lose a seat in the U.S. House of Representatives. If its population is growing, it might gain a seat.

The House and the Senate are the country's two law-making bodies. Each state only gets two senators regardless of how big or small it is. However, states are given seats in the House of

Representatives based on how many people live in each state.

Census numbers also help decide how to divide up money from the government. This money is shared each year. It helps states and communities build roads, schools, hospitals and fire departments. More than 100 government programs also depend on the census. The programs use the census to send money to where the need is greatest.

Among the programs are Head Start and food assistance for poor people. Head Start is a program for children from birth to 5 years old. It focuses on getting kids ready for school through early learning and other help.

George Washington Took The First Census

The 2020 census marks the 24th national count, which the U.S. Constitution requires to be held every 10 years. The first census was in 1790. It was soon after George Washington became president. About 650 men set out on foot or horseback to count everyone living in their areas.



Washington and Secretary of State Thomas Jefferson both thought the final number was low. That first census counted nearly 3.9 million people. Fighting has come with just about every census since then.

After all, it is not easy getting a snapshot of the entire country for a single day. Census Day is April 1. The U.S. population grows by one person every 23 seconds. The growth is from births and people coming from other countries.

Not Everyone Was Counted In 2010

Some people are more difficult to count. People living far from cities, the homeless and children who split their time between two homes present challenges to getting a good count. The U.S. Census Bureau says that about 1 million kids younger than age 5 were not counted in 2010. That was the highest number for any age group.

Leaders have tried to simplify the 2020 count. For the first time, responses can be made online. They can also be done by phone and mail. To help people who speak little or no English, there are guides in 60 languages. Braille is offered for people who are blind.

Each head of a home, even someone living alone, must fill out a census form. They face a fine if they don't. There are no questions about whether someone is an American citizen. This has helped with the worries of some people. They said asking about citizenship would reduce the response from immigrants. Immigrants are people who have come from another country.

The Census Bureau has to protect people's information. It is the law. No one will be identified by name as the numbers in the census are studied.

However, for anyone tempted not to respond, keep this in mind. The people who are census takers are like a dog looking for that tasty bone he buried. They don't give up easily. Ignore their letter, and more will follow. They really want everyone to be counted.

The US Census

Cut out the vocabulary cards below. Use the article to help you match the words with the definitions and sentences.

Census	A count of all the people living in the United States	The _____ happens every 10 years.
Census Bureau	The part of the government that is in charge of the Census	The _____ is required to protect everyone's information.
Population	How many people live in a city, state, or country	The census helps to count the country's _____.
Fine	Money paid for not following the law	People who don't answer the Census may receive a _____.

Use the article to help you answer the questions below.

1. The Census is *always* accurate.
 - a. True
 - b. False
2. The US population grows by one person every 23 seconds.
 - a. True
 - b. False
3. This is the first year people can complete the Census online.
 - a. True
 - b. False
4. The Census helps the government decide how to divide up money for hospitals, roads, and other programs.
 - a. True
 - b. False