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Mississippi Science



Deer Facts

What animal is named for its big white tail, which you see when it runs? The white-tailed deer! The white-tailed deer is one of Mississippi's state land mammals. White-tailed deer live throughout Mississippi, in forests and fields. They live where they can find foods like grass, berries, leaves, and acorns. White-tailed deer use camouflage to hide. Their fur changes color with the season.

Interactive Student Edition

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KWL

What Do You Know?

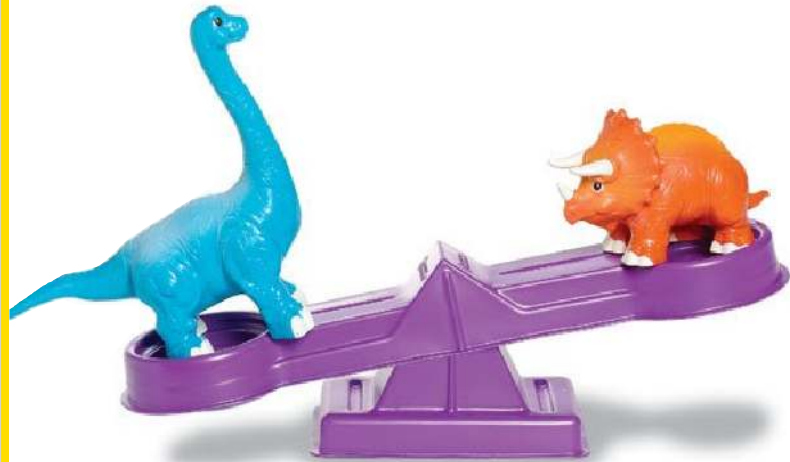
Talk with a partner.

Draw an object.

Tell about the object.



Observing Objects





Contents

- 1 How Can You Describe Matter? 4
- 2 How Can You Use Tools to Observe? 10
- 3 What Does a Magnet Attract? 14

KWL

What Do You Want to Know?

What do you want to know about matter?

How can you compare different objects?

VOCABULARY

matter What all things are made of. (*noun*)

property One part of what an object is like. (*noun*)

VOCABULARY ACTIVITY

Multiple Meanings

matter

The word **matter** has different meanings.

Tell what **matter** means on this page.



2.a. Recognize that most things are made of parts. (DOK 1)

2.b. Describe properties and changes of objects and materials. (DOK 1)

1

How Can You Describe Matter?

Matter is what all things are made of.

You can use your senses to learn about the properties of matter.

A **property** is one part of what an object is like.

You can see and smell your lunch.

You can touch it and taste it.



You can see a flower.
You can smell a flower.
Many flowers smell nice.



1. How else can you tell about a flower?

2. What senses can you use to learn about a pet?

I Wonder . . . What senses might a mother cat use to tell her kittens apart?

3. In what other ways can you tell about the kitten besides by how it feels?



You can feel a kitten's fur. It is soft.

You can use your senses to compare two dogs. Look at the next page.



kitten

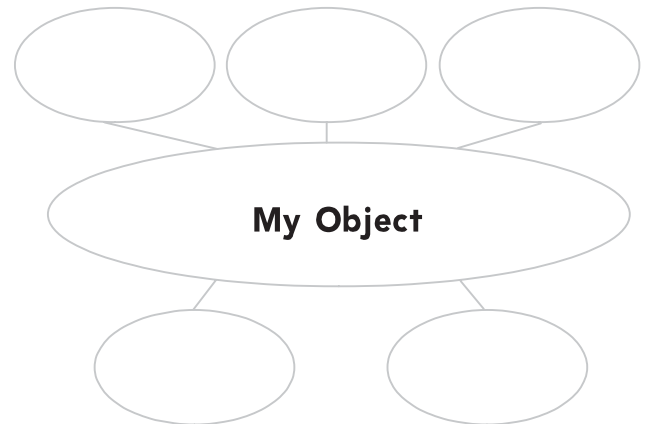
Comparing Dogs

Sense	 Dog A	 Dog B
Hearing	low sound	high sound
Seeing	large and brown	small and white
Touch	smooth	rough

4. Choose an object in your classroom.

Use your senses to learn about the object.

Describe the properties of the object.





Science Test Practice

Circle the correct answer.

5. Sheila is sorting fruit. She puts cherries, apples, and strawberries in the same group. What property could she be sorting by?

- (A) taste
- (B) size
- (C) color



2.b. (DOK 1)

6. How is the spring toy different from the pencil?
-

Sorting Matter by Properties

You can sort matter by its properties.

You can sort matter by color.

You can sort it by shape.

How else can you sort it?



bends



does not bend

Things Are Made of Parts

Most things are made of parts.
All the parts together make up an object.

A toy truck is made of parts.
All the parts work together to make the truck move.



Main Idea

What are some properties you can observe?

Summary

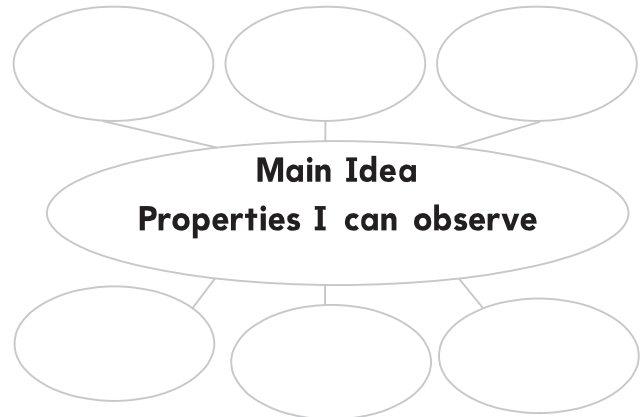
We can describe the properties of objects.

Objects are made of parts.

What would happen if you took the wheels off a toy truck?

Main Idea

What are some properties you can observe?



VOCABULARY

magnify To make something look larger. (*verb*)

weigh To find out how heavy an object is. (*verb*)

VOCABULARY ACTIVITY

Use Syllables

magnify

Break the word into syllables.

Say each syllable aloud.

Clap once for each syllable.

How many syllables are in **magnify**?



2

How Can You Use Tools to Observe?

Scientists use tools to learn about the properties of matter. You can use tools, too.

A Tool to Magnify

A hand lens can magnify a thing. To **magnify** is to make something look larger.



Things look different with a hand lens. You can see that things are made of tiny parts when you use a hand lens.

without a hand lens



with a hand lens



1. Fill in the blanks.

Things look different with a

_____.

You can see tiny _____ with a hand lens.



Science Test Practice

Circle the correct answer.

2. Which tool can you use to magnify something?

- (A) ruler
- (B) hand lens
- (C) balance



1.c. (DOK 1)



Use the Activity Card **Observe Details**.



1.c.

3. Which toy weighs less?
How do you know?

I Wonder . . . What could I do to make both sides of the balance equal?

Directed Inquiry

Flip Chart p. 1

Use Tools

Use a ruler, a balance, and a hand lens to gather information about different objects.



1.b., 1.c., 1.e., 2.b.

A Tool to Weigh

You **weigh** something to find how heavy it is.

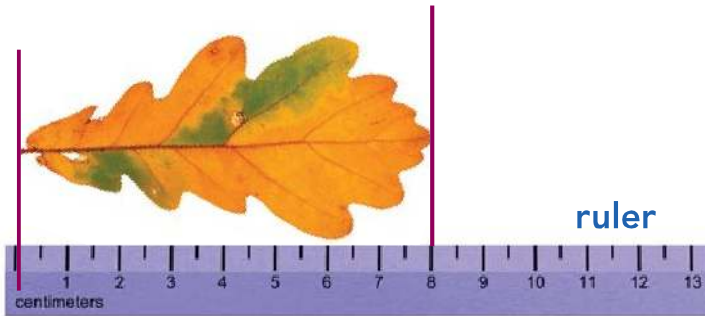
A balance tells you if one thing weighs more than another thing. The balance is lower on the side of the blue toy.

The blue toy weighs more than the orange toy.



A Tool for Length

You can use a ruler to find how long or tall something is. How long is the leaf?



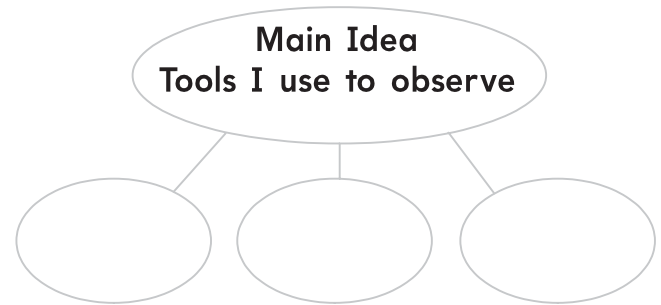
Main Idea

What tool tells you which thing weighs more than another?

Summary

Tools help us find out more about objects.

What are some tools you can use to observe objects?



▶ Main Idea

What tool tells you which thing weighs more than another?

VOCABULARY

attract To pull toward.
A magnet attracts iron and steel.
(*verb*)

magnet An object that pulls iron and steel toward it. (*noun*)

repel To push away.
Like poles of magnets repel each other. (*verb*)

VOCABULARY ACTIVITY

Use Pictures

magnet

Circle the magnet in the picture.



2.b. Describe properties and changes of objects and materials. (DOK 1)

2.d. Differentiate between interactions of two magnets and the interaction of a magnet with objects made of iron, other metals, and nonmetals. (DOK 1)

3

What Does a Magnet Attract?

A **magnet** is an object that pulls iron and steel toward it.



A magnet **attracts** objects when it pulls them.

Sometimes a magnet attracts things without touching them.



1. Fill in the blanks.

A _____ pulls _____

and _____ toward it.

A magnet _____ objects when it pulls them.

2. Can a magnet pull something without touching it?

3. List two objects in the picture that might be attracted by a magnet.

a. _____

b. _____



Science Test Practice

Circle the correct answer.

4. Which is not attracted to a magnet?

- (A) iron
- (B) steel
- (C) plastic



2.d. (DOK 1)

An object that attracts magnets is magnetic.

A metal called iron is magnetic.

A metal called steel is magnetic.

Most magnetic objects have iron or steel in them.



magnetic objects

An object that does not attract magnets is not magnetic. Objects made of glass, wood, and paper are not magnetic. Metal objects without iron or steel are not magnetic. These objects do not attract magnets.



These objects are not magnetic.

5. On this page, draw an X on each item that is not attracted to a magnet.
6. Fill in the blanks.

Objects	
Not Attracted to Magnets	Attracted to Magnets
a. _____	a. _____
b. _____	b. _____
c. _____	

7. **Circle** the word that tells you how many poles a magnet has.

I Wonder . . . How close must two magnets be for them to repel each other?



Use the Activity Card **Observe Magnets**.



2.d.



Flip Chart p. 2

Use Magnets

Test objects with a magnet to find out which ones are and are not attracted to the magnet.



1.b., 1.d., 1.e., 2.b., 2.d.

Magnets Act on Each Other

Every magnet has two poles. Poles that are different attract each other. Poles that are alike repel each other.

Repel means to push away.

different poles

like poles



Put two magnets together.
You can feel the poles act
on each other.

Look at the magnets
on this page.

Are the poles next
to each other alike
or different?



Cause and Effect

Why are some things attracted
by a magnet?

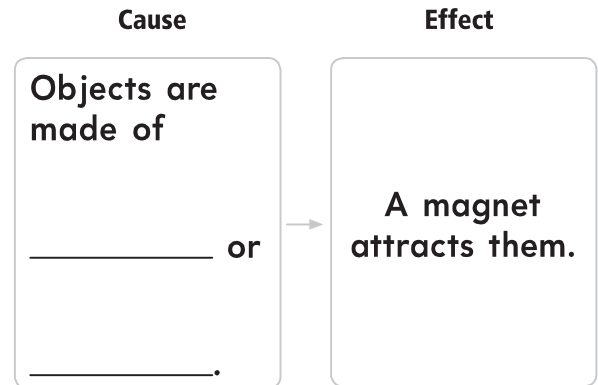
Summary

Magnets attract things made of iron
and steel.

Which poles need to be close to
one another to attract?

▶ Cause and Effect

Why are some things attracted
by a magnet?



KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

2 A _____ is a tool for measuring length.

3 A property is one _____ of what an object is like.

4 You can use a _____
_____ to see the parts of small things.

KWL

What Did You Learn?



Science Test Practice

1 What does a magnet attract?

(A) things made of wood

(B) things made of plastic

(C) things made of iron or steel



2.d. (DOK 1)

2 What tool do you use to measure length?

3 What is a property?

4 What can you use to see the parts of small things?

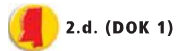
Draw a picture of some objects that are attracted to magnets.



Circle the correct answer.

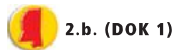
1. Which does a magnet attract?

- (A) iron
- (B) plastic
- (C) wood

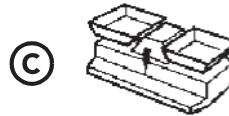


2. What property can you learn about by using a balance?

- (A) color
- (B) shape
- (C) weight



3. Which picture shows a tool used to measure length?

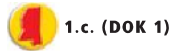


4. Look at the picture.



How do you use this tool?

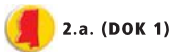
- (A) to measure length
- (B) to weigh something
- (C) to magnify something



1.c. (DOK 1)

5. Which object is made of parts?

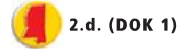
- (A) a drinking glass
- (B) a computer
- (C) a piece of paper



2.a. (DOK 1)

6. What happens when two poles are different?

- (A) They repel each other.
- (B) They attract each other.
- (C) They do nothing to each other.



2.d. (DOK 1)

KWL

What Do You Know?

Talk with a partner.

List ways objects change.

Changes in Matter





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- 1 What Are Solids, Liquids, and Gases?26
- 2 What Do Heating and Cooling Do?.....32

KWL

What Do You Want to Know?

What do you wonder about how things change?

VOCABULARY

gas Matter that changes shape to fill all the space it is in. (*noun*)

liquid Matter that flows and takes the shape of its container. (*noun*)


solid Matter that has its own shape. (*noun*)

VOCABULARY ACTIVITY

Use Pictures

liquid

Circle the picture of the **liquid** on this page.

-  **2.b.** Describe properties and changes of objects and materials. (DOK 1)
- 2.f.** Compare and classify solids and liquids. (DOK 2)

1

What Are Solids, Liquids, and Gases?

Matter is what all things are made of.

Look at the pictures.

They show three kinds of matter.



solids



liquid

Solids are a kind of matter.
Liquids are a kind of matter.
Gases are a kind of matter.
Gas is inside these balloons.



1. What are three kinds of matter?

a. _____

b. _____

c. _____



Science Test Practice

Circle the correct answer.

2. What kind of matter is warm water?

(A) gas

(B) liquid

(C) solid



2.f. (DOK 2)

3. List some things in your classroom that are solids.

4. How can you tell if an object is a solid?

Solids

A **solid** is matter that has its own shape.

Rocks are solids.

Things in your room are solids, too.



solid

You can do things to change
a solid's shape.

You can cut it.

You can bend it.

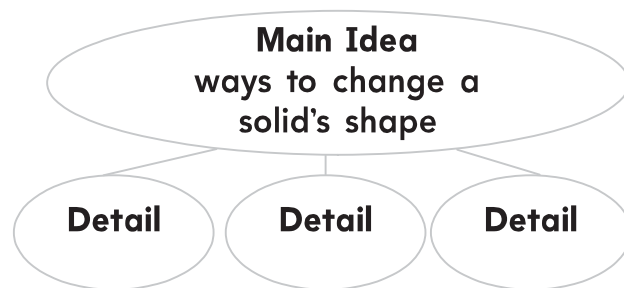
You can break it.



5. Look at the pictures on these
two pages.

Can you find one thing that is
not a solid?

6. What are some ways you can
change a solid's shape?



Use the Activity Card **Make an ABC List
of Solids.**



1.b., 2.f.

7. Underline the words that tell about a liquid.

I Wonder . . . I know that a liquid takes the shape of what it is in.

What shape is the liquid in the dish?

Directed Inquiry

Flip Chart p. 3

Compare Matter

Compare the properties of solids, liquids, and gases.



1.b., 1.e., 2.f.

Liquids

Water is a liquid.

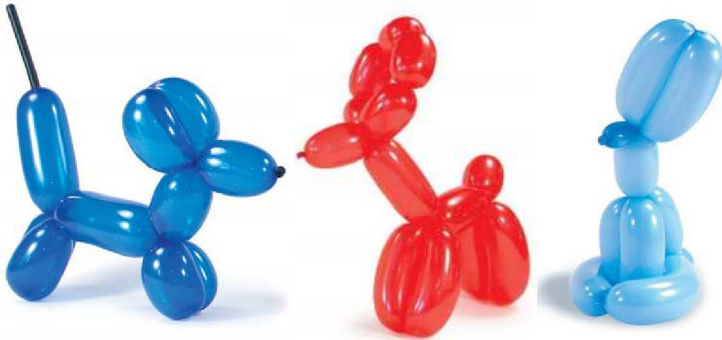
A **liquid** is matter that flows and takes the shape of what it is in.

A liquid does not have its own shape.



Gases

A **gas** is matter that changes shape to fill all the space it is in. The air around you is a gas. Gas is inside these balloons.



Classify

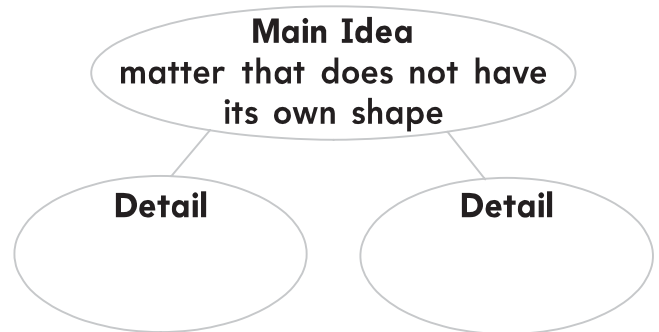
What kinds of matter do not have their own shape?

Summary

Three kinds of matter are solid, liquid, and gas. How can you tell if something is a gas?

▶ Classify

What kinds of matter do not have their own shape?



VOCABULARY

condense To change from a gas to a liquid. (*verb*)

evaporate To change from a liquid to a gas. (*verb*)

freeze To change from a liquid to a solid. A pond may freeze in winter. (*verb*)

melt To change from a solid to a liquid. (*verb*)

VOCABULARY ACTIVITY

Use Words

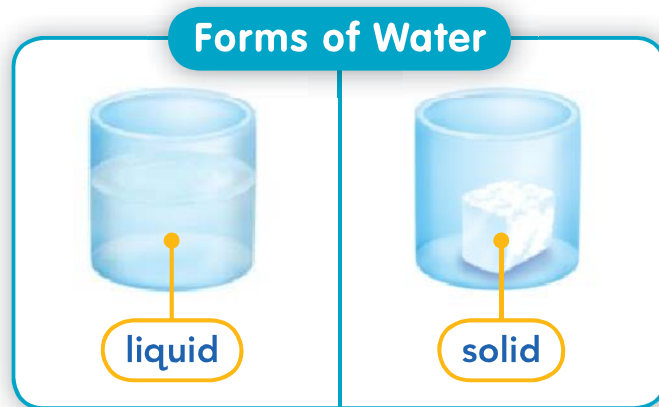
freeze

Circle the words that help you know what **freeze** means.

2

What Do Heating and Cooling Do?

Water can change from one form to another. Water freezes when it gets very cold. To **freeze** is to change from a liquid to a solid. Ice is solid water.



Some solids melt when they are heated.

To **melt** is to change from a solid to a liquid.

Ice melts when it gets warm.

A frozen juice pop changes from a solid to a liquid when it melts.



I. What makes some solids melt?

I Wonder . . . Heat can change some solids to liquid.

What solids do not melt with heat?



Use the Activity Card **Observe Ice**.



1.a., 1.e., 2.b.

Directed Inquiry

Flip Chart p. 4

Predict Changes

Predict what will happen when bags of ice are placed in bowls of warm and cold water. Record predictions, and observe changes in the ice cubes.



1.e., 2.b.



Science Test Practice

Circle the correct answer.

2. When can part of the pond change into a solid?

- (A) when it is warm outside
- (B) when it is very hot outside
- (C) when it is very cold outside



2.b. (DOK 1)

3. How can heat change solid water?

Cause

Effect

Heat is added.



A Pond Changes

Fall
The water in the pond is liquid.



Winter
The water on top of the pond is solid.



Spring
The water in the pond is liquid again.



pond

Liquid to Gas

Water can be a gas, too.

Water evaporates when it is heated.

To **evaporate** is to change from a liquid to a gas.

You do not see water when it is a gas.

Heat from the Sun makes this water evaporate.



4. Water evaporates when it is heated. What does **evaporate** mean?

5. What causes liquid water to change into a gas?

Summary

Water can freeze, melt, and evaporate.

When a liquid cools, it changes

into a _____.

Draw Conclusions

Why does a pond freeze in winter?

Fact

In winter, the air temperature is cold.



Fact



Conclusion

Cooling Changes Gases

Cooling can make gases change into liquids.

To **condense** is to change from a gas to a liquid.

The air outside a glass is warm.

Ice in the glass is cold.

Water vapor near the glass cools.

It makes drops of water on the glass.



Draw Conclusions

Why does a pond freeze in winter?

KWL

What Did You Learn?



Science Test Practice

1 Which object is a liquid?

- (A) milk
- (B) paper
- (C) rock



2.f. (DOK 2)

- 2 What are two ways water can change?
- 3 How do you know if an object is a solid?
- 4 What happens when a solid melts?

KWL

What Did You Learn?



Science Test Practice

1 **Circle** the correct answer.

2 Two ways water can change are

Possible answers:

by _____ or evaporating.

3 An object is a solid if it has its own

_____.

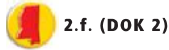
4 When a solid melts, it changes to a

_____.

Circle the correct answer.

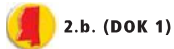
1. How are milk, juice, and oil the same?

- (A) They are solids.
- (B) They are gases.
- (C) They are liquids.



2. What happens during condensation?

- (A) Water changes from a liquid to a solid.
- (B) Water changes from a solid to a liquid.
- (C) Water changes from a gas to a liquid.



3. Which picture shows matter that has its own shape?

(A)



(B)



(C)

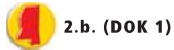


4. Look at the picture.



What happens when water boils?

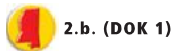
- (A) It changes to a gas.
- (B) It changes to a mixture.
- (C) It changes to ice.



2.b. (DOK 1)

5. What are all things made of?

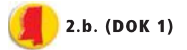
- (A) solids
- (B) matter
- (C) liquids



2.b. (DOK 1)

6. When does water freeze?

- (A) when it gets warm
- (B) when it gets very cold
- (C) when it gets cool



2.b. (DOK 1)

KWL

What Do You Know?

Talk with a partner.

What kinds of things move?

Objects in Motion





Contents

- 1 How Do Things Move? 42
- 2 What Do Forces Do? 46

KWL

What Do You Want to Know?

What do you wonder about how things move?

What do you want to know about forces?

What do you want to know about motion?

VOCABULARY

motion Moving from one place to another. (*noun*)

position A place or location. (*noun*)

VOCABULARY ACTIVITY

Use Words

position

What words on this page help you understand what **position** means?

Circle them.



2.c. Describe the effects of various forms of motion and of forces on objects. (DOK 2)

Different forms of motion (sliding, rolling, straight line, circular, back-and-forth)

1

How Do Things Move?

You can tell about an object by telling about its position.

Position is a place or location.

Position words help you talk about where an object is.

These words compare where two objects are.



to the left of
the piggy bank

on the desk

under the piggy
bank and over
the books



1. Describe the position of the pillow.

2. What is another way to describe the position of the table?

3. What is the place or location of objects called?

Directed Inquiry

Flip Chart p. 5

How Things Move

Explain ways to make objects move.
Record data to share with others.



1.d., 1.e., 2.c.

4. Underline the words that describe different kinds of motion.
5. Draw an arrow on the picture to show the swing's motion.



Science Test Practice

Circle the correct answer.

6. Which way do the hands on a clock move?

- (A) back and forth
- (B) in a circle
- (C) in a straight path



2.c. (DOK 2)



Use the Activity Card **Observe a Ball's Motion.**



2.c.

Changing Position

Something that is in **motion** changes its position.

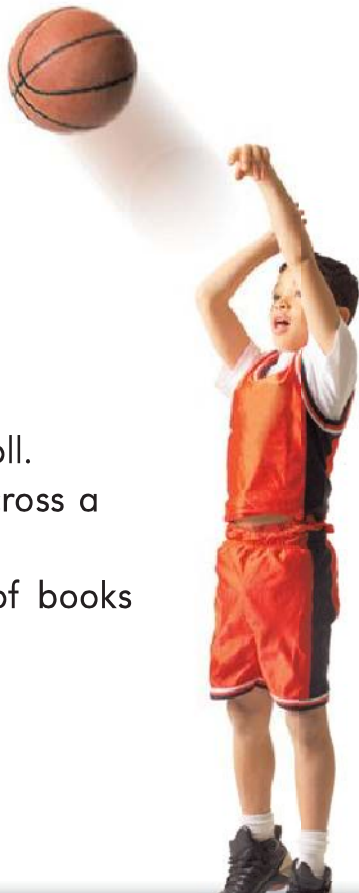
It moves from one place to another. How can you tell if something is moving?

You can compare its position to things around it.

There are different kinds of motion. Things can move in a straight line. Things can move in a circle.



This girl is moving back and forth.



How will this ball move next?

Things can move up and down.

Things can slide or roll.

You can roll a ball across a floor.

You can slide a box of books across a floor.

Draw Conclusions

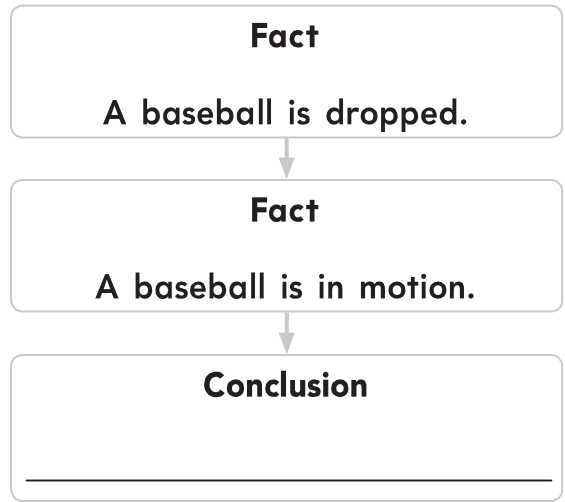
Does a baseball move in a straight line or a circle when it is dropped?

Summary An object can move in a straight line, in a circle, back and forth, and up and down.

What are two other ways objects can move?

▶ Draw Conclusions

Does a baseball move in a straight line or a circle when it is dropped?



VOCABULARY

force A push or a pull. (*noun*)

friction A force that makes an object slow down when it rubs against another object. (*noun*)

VOCABULARY ACTIVITY

Use Words

When you push a wheelbarrow, you are using **force**.

Use clues from the sentence above to help you understand what the word **force** means.



2.c. Describe the effects of various forms of motion and of forces on objects. (DOK 2)

Effects that motion can produce (spilling, breaking, bending)

2 What Do Forces Do?

You use force to move something.

A **force** is a push or a pull.

A large force moves something heavy.

A small force moves something light.

When you push or pull something, you give it energy.

Big things need more energy to move than small things.



This needs a large push.

This needs a small push.

Force can cause things to bend, spill, or break.

You can bend a piece of modeling clay.

If a child knocks over a cup of paint, the push causes the paint to spill.

A karate student uses force to break a board.



1. How can pushes and pulls change an object's motion? Give an example.

2. Name three things that forces can do.

Express Lab

Use the Activity Card **Measure Motion**.

1 1.c., 2.c.

Directed Inquiry

Flip Chart p. 6

Change Motion

Use a tool to measure the distance an object travels. Infer how more or less force can change the object's movement.

1 1.c., 1.e., 2.c.



Science Test Practice

Circle the correct answer.

3. Rose is closing a drawer.
Which force is she using?

- (A) pull
- (B) friction
- (C) push



2.c. (DOK 2)

I Wonder . . . I know that different kinds of surfaces cause different friction. Why is it harder to ride a bike on grass than on cement?

Friction and Motion

Friction is a force.

Friction makes one thing slow down when it rubs against another thing. Bike tires rub against the road when you ride your bike.

The rubbing causes friction.

cement



grass



gravel



Riding on a rough surface causes a lot of friction. Riding on a smooth surface causes less friction.

Changing Direction

Forces can change the direction of something that is moving.

You push a ball with your hand to bounce it.

The ball moves down until it hits the ground.

Then it changes direction and bounces back up.



Cause and Effect

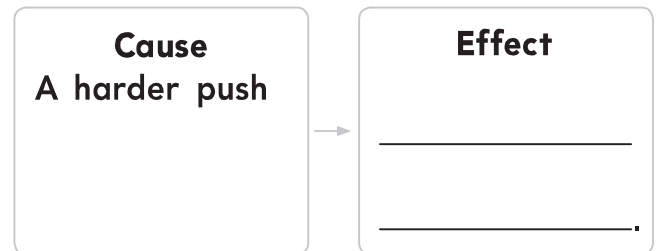
What will happen to the basketball if you push harder on it?

Summary A force can start, slow down, or stop the motion of an object.

How does friction affect motion?

▶ Cause and Effect

What will happen to the basketball if you push harder on it?



KWL

What Did You Learn?



Science Test Practice

- 1 **Circle** the correct answer.
- 2 Two ways things can move are by _____ and _____.
- 3 A small force can move something _____.
- 4 Forces can _____ something or _____ something.

KWL

What Did You Learn?



Science Test Practice

- 1 What happens when you push an open door?
 - A The door moves away from you.
 - B The door moves toward you.
 - C The door stays still.
- 2 What are two ways things can move?
- 3 What can a small force move?
- 4 What are two things that forces can do?



2.c. (DOK 2)

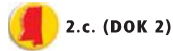
Draw a picture of some ways objects move.



Circle the correct answer.

1. You are riding your bike across different surfaces. Which causes the least friction?

- (A) cement
- (B) grass
- (C) pebbles

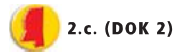
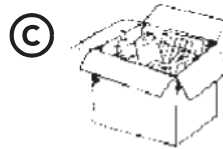
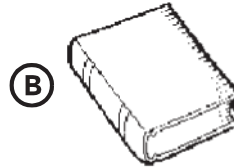


2. Sheryl wants to move a box across the floor. She wants to know how much force she will need. What should she ask?

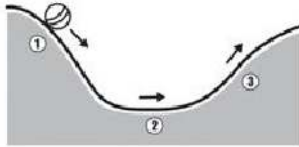
- (A) What color is the box?
- (B) How much does the box weigh?
- (C) How old is the box?



3. Look at the pictures. Which would you need the most energy to move?

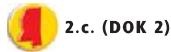


4. Look at the picture.



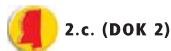
How is the ball moving?

- (A) It is rolling.
- (B) It is moving in a circle.
- (C) It is sliding.



5. Terrence knocks over a glass of water. What happens to the water?

- (A) It spills.
- (B) It breaks.
- (C) It bends.

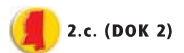


6. Look at the picture.



What will the ball do next?

- (A) Move back and forth.
- (B) Change direction.
- (C) Slow down.



KWL

What Do You Know?

Talk with a partner.

List what you know about light.

What does the light bulb give off?

Light and Sound





Contents

- 1 Where Does Light Come From?56
- 2 How Is Sound Made?62
- 3 How Are Sounds Different?66

KWL

What Do You Want to Know?

Think about light.

Where have you seen light?

What do you wonder about light?

VOCABULARY

light Something that lets you see.
(*noun*)

shadow Something that forms
when an object blocks light. (*noun*)

VOCABULARY ACTIVITY

Use Syllables

shadow

Break the word into syllables. Say each syllable aloud. Clap once for each syllable. How many syllables does the word **shadow** have?



1

Where Does Light Come From?

Earth gets light from the Sun.
You can see **light**.



Light comes from other places.
Fires give off light.
A light bulb gives off light.
They give off heat, too.



1. Where does Earth get light from?

2. **Circle** the thing that is giving off light.



3. Light passes through _____,
_____, and _____.

I Wonder . . . Plants need sunlight. Should you place a plant near a window or in a room with no windows?

Light and Shadows

Light can pass through some things.

Light passes through clear glass.

Light passes through water and air.



Light does not pass through some things. Some things stop light. Look at the picture. No light passes through.



4. Change the picture on the left-hand page so that light does not pass through the window.



Science Test Practice

Circle the correct answer.

5. Which of the following stops light from passing through?

- (A) wooden door
- (B) clear glass
- (C) air



4.f. (DOK 1)

6. Name something that stops some light from passing through.

Other things stop some light from passing through.

Sunglasses stop some light.

Look at the picture.

Some light passes through.



Your body blocks all light.
A dark shape called a **shadow**
forms when something
blocks light.



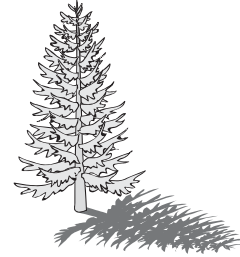
shadow

Main Idea

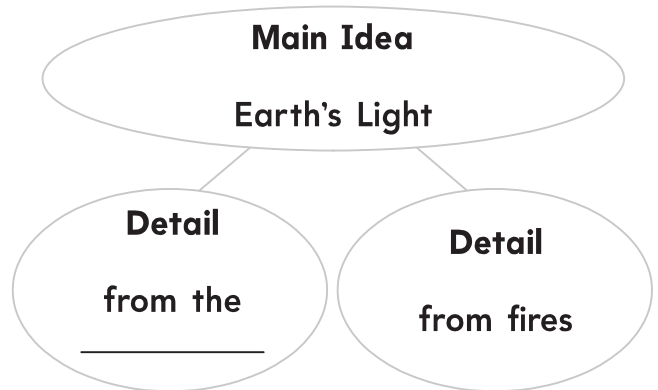
Where does Earth get its light?

Summary You can see light.
When something blocks light,
a shadow forms.

Circle the shadow. Draw the Sun.



Main Idea and Details Where
does Earth get its light?



VOCABULARY


sound Something that you can hear. (*noun*)

vibrate To move back and forth very fast. (*verb*)

VOCABULARY ACTIVITY

Use Words

Circle the words on this page that help you know what **vibrate** means.

 **2.g.** Identify vibrating objects that produce sound and classify sounds (e.g., high or low pitched, loud or soft). (DOK 1)

2 How Is Sound Made?

You can hear **sound**.

Sound is made when something **vibrates**.

To vibrate means to move back and forth very fast.

Many kinds of things vibrate and make sound.

This frog makes sounds.



The space shuttle makes sound when it takes off.



1. **Circle** the pictures of things on these two pages that make sounds.

I Wonder . . . Sound is made when something vibrates. How is sound made when two sticks are hit together?



Use the Activity Card **Make Sounds**.



2.g.



Science Test Practice

Circle the correct answer.

2. Max plays the guitar. What happens when he plucks a string?

- (A) The string vibrates and makes a sound.
- (B) The string vibrates and makes no sound.
- (C) The string vibrates, and the sound stops.



2.g. (DOK 2)

Directed Inquiry

Flip Chart p. 7

Make Sounds

Pluck a rubber band to observe how sound is made.



1.d., 1.e., 2.g.

A bird makes sounds when it sings. You make sounds, too. Place your hand on the side of your neck. Now sing or talk. You can feel the parts in your neck vibrate.



Hearing Sound

A drum vibrates when you hit it.
The air around it vibrates, too.
Air that vibrates makes parts
inside your ear vibrate.
Then you hear sound.



Draw Conclusions

How does the sound of a drum reach your ears?

Summary You can hear sound.

Trace the vibrations from the drum to the boy's ear.

Draw Conclusions How does the sound of a drum reach your ears?

Fact

A drum _____ when you hit it.



Fact

The air around the drum _____.



Fact

The air that vibrates makes parts inside your ear _____.



Conclusion

You can hear the drum.

VOCABULARY

pitch How high or low a sound is.
(*noun*)


volume How loud or soft a sound is.
(*noun*)

VOCABULARY ACTIVITY

Find All the Meanings

pitch

A word can have more than one meaning. You may know that the word **pitch** means “to throw a ball.” The word **pitch** can also mean “how high or low a sound is.”

 **2.g.** Identify vibrating objects that produce sound and classify sounds (e.g., high or low pitched, loud or soft). (DOK 1)

3 How Are Sounds Different?

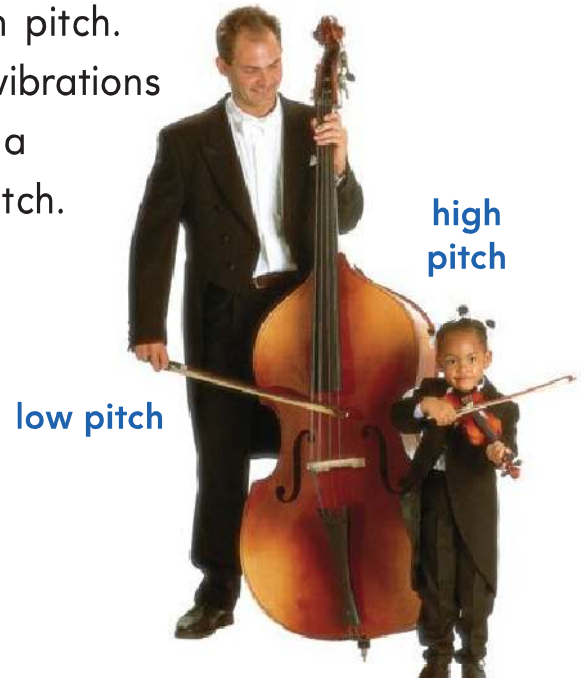
Not all sounds are the same.

Pitch

Pitch is how high or low a sound is.

Fast vibrations make a high pitch.

Slow vibrations make a low pitch.



The big drum makes a low pitch.
The wind chimes make a high pitch.
What else makes a high pitch?



I. What makes a sound's pitch high or low?



Use the Activity Card **Compare Sounds**.

 1.b., 2.g.

Directed Inquiry

Flip Chart p. 8

Different Sounds

Fill jars with different amounts of water. Compare the sounds the jars make when tapped with a pencil. Use data to find a pattern.

 1.d., 1.e., 2.g.

2. When you yell, your voice has a _____ volume.

I Wonder . . . A drum can make a loud sound or a soft sound. How can you change the volume of a drum?

Volume

Volume is how loud or soft a sound is.

You make a soft sound when you whisper.

You use little energy to make a soft sound.

soft volume



You make a loud sound when you yell.

You use a lot of energy to make a loud sound.

loud volume



3. **Circle** the objects on this page that are being used to make a loud sound.

4. Volume is how _____ or _____ a sound is.



Science Test Practice

Circle the correct answer.

5. When you use a lot of energy to make a sound, what do you hear?

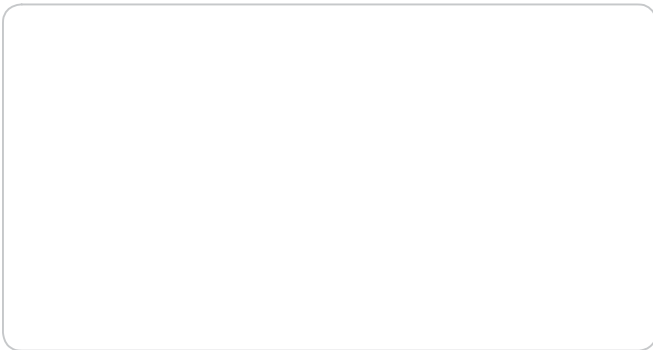
- (A) a soft sound
- (B) a loud sound
- (C) a low sound



2.g. (DOK 1)

6. What does it mean when a smoke alarm beeps?

7. Fire trucks make loud noises to warn you to get out of the way. Draw a picture of something that makes a sound that helps you stay safe.



Sounds Keep You Safe

Some sounds help to warn you.

These sounds keep you safe.

A smoke alarm beeps.

It warns you to go

to a safe place.



A fire truck makes a loud sound.
It warns you to get out
of the way.



Compare and Contrast

How is a high pitch different
from a low pitch?

Summary Pitch is how high or
low a sound is. Volume is how loud
or soft a sound is.

Some sounds help to warn you.

Circle the objects on these two
pages that make a sound to help
keep you safe.

Compare and Contrast How
is a high pitch different from a low
pitch?

Low Pitch	High Pitch
vibrates _____	vibrates _____

KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

- 2 Pitch is how _____ or _____ a sound is.
- 3 Two things that make sounds that keep me safe are _____ and _____.
- 4 I can see a shadow when _____.

KWL

What Did You Learn?



Science Test Practice

- 1 Which tells how loud or soft a sound is?
- (A) heat
 - (B) light
 - (C) volume
- 2 What is pitch?
- 3 What are two things that make sounds to keep you safe?
- 4 When will you see a shadow?



2.g. (DOK 1)

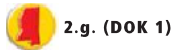
Draw a picture to show something that makes a loud sound.



Circle the correct answer.

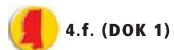
1. How is sound made?

- (A) Something vibrates.
- (B) Something stops vibrating.
- (C) Something gives off light.



2. Which of these objects would let light pass through?

- (A) black paper
- (B) clear glass
- (C) pencil



3. Lan made this table about what light can pass through. Which column or columns should he check?

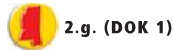
	clear glass	wooden door	air
Light can travel through			

- (A) clear glass and wooden door
- (B) clear glass and air
- (C) air and wooden door



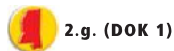
4. One sound is high. One sound is low. What do you know?

- (A) They have the same pitch.
- (B) They have different volumes.
- (C) They have different pitches.

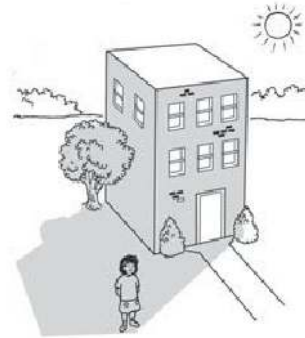


5. A violin string is vibrating quickly. Which word describes the pitch of the sound?

- (A) high
- (B) loud
- (C) low



6. Look at the picture.



Why is the girl in a shadow?

- (A) The Sun shines through the windows.
- (B) The building blocks the Sun's light.
- (C) The building makes the street warm.



KWL

What Do You Know?

Talk with a partner.

List what you know about living things.

What living things do you see here?

Living Things





Contents

- 1 What Is a Living Thing?.....78
- 2 What Do Living Things Need?82
- 3 Where Do Plants and Animals Live?.....86

KWL

What Do You Want to Know?

What things do you need to live?

What do you wonder about living things?

VOCABULARY

living thing Something that grows, changes, and makes other living things like itself. (*noun*)

nonliving thing Something that does not eat, drink, grow, and make other things like itself. (*noun*)

VOCABULARY ACTIVITY

Use Pictures

living thing

Look at the picture of the squirrel.

What do you know about this **living thing**?



3.e. Identify the basic needs of plants and animals and recognize that plants and animals both need to take in water, animals need food, and plants need light. (DOK 1)

1

What Is a Living Thing?

A **living thing** grows and changes.

It makes other living things that are like it.

It needs air and food.

It needs water and space.



People and animals
are living things.
Trees and grass
are living things, too.



1. Draw a picture of a living thing in your classroom.



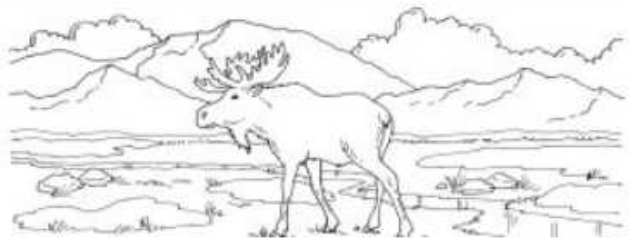
2. Draw an X on the living things in the pictures on these two pages.



Use the Activity Card **Find Living Things**.



1.b., 3.a.



3. Circle the living things in this environment.
4. Draw an X on the nonliving things in this environment.



Science Test Practice

Circle the correct answer.

5. What do all living things need?
 - (A) grass
 - (B) trees
 - (C) food

3.e. (DOK 1)

Nonliving Things

A **nonliving thing** does not eat or drink.

It does not grow.

It does not make other living things that are like it.

It does not need air, food, and water.

living thing

nonliving thing



A nonliving thing may
act like a living thing.
A fire grows.
A fire needs air.
But a fire does not need
food or water.
A fire is a nonliving thing.



Main Idea

What is a nonliving thing?

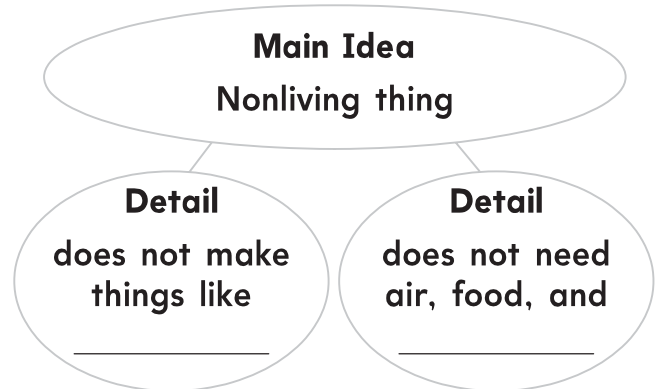
Summary

Living and nonliving things are in many places.

What living and nonliving things are in your neighborhood?

▶ Main Idea

What is a nonliving thing?



VOCABULARY

food What living things use to get energy. (*noun*)

sunlight Energy from the Sun. (*noun*)

VOCABULARY ACTIVITY

Break It Apart

sunlight

Write the two smaller words in sunlight.

_____ + _____



3.c. Communicate the importance of food and explain how the body utilizes food. (DOK 2)

3.e. Identify the basic needs of plants and animals and recognize that plants and animals both need to take in water, animals need food, and plants need light. (DOK 1)

4.e. Collect, categorize, and display various ways energy from the sun is used. (DOK 2)

2

What Do Living Things Need?

Plants and animals need water and food.

Food is what living things use to grow.



Plants make their own food.
Plants use sunlight, air, and water
to make food.

Sunlight is energy from the Sun.



1. Living things use _____ to grow.
2. Underline the words that tell what sunlight is.
3. Plants use water, sunlight, and _____ to make food.

Directed Inquiry

Flip Chart p. 9

Sunlight and Leaves

Observe plants to see how they take in energy from the Sun.

1.e., 1.f., 3.e., 4.e.

I Wonder . . . Animals need food to live.

What could happen if an animal could not get food?

The animal might _____.



Science Test Practice

Circle the correct answer.

4. How do animals get food?

- (A) They buy their food.
- (B) They catch their food.
- (C) They make their own food.



3.e. (DOK 1)

Food

Animals eat food.

Some animals eat plants.

Some animals eat other animals.



Many animals eat both plants and animals.
Most people eat both plants and animals.

Food Chain



Plants make their own food.



An insect eats plants.



A bird eats insects.

Summary

Plants and animals need food.

Draw a picture of your favorite food.



▶ Sequence

Fill in the missing part of the food chain.

The Sun helps plants make food.

An insect eats the

_____.

A frog eats the insect.

VOCABULARY

forest A place with many trees that grow close together. (*noun*)

shelter A safe place for animals to live. (*noun*)

wetland A low area of land that is very wet. (*noun*)

VOCABULARY ACTIVITY

Break It Apart

wetland

Write the two smaller words in **wetland**.

_____ + _____



3.a. Classify animals and plants by observable features (e.g., size, appearance, color, motion, habitat). (DOK 2)

3

Where Do Plants and Animals Live?

A **forest** is a place with many trees.

The trees grow close together. Animals use the living and nonliving things in a forest. They use these things for food and shelter.

Shelter is a safe place to live.





blue jay

squirrel

fern

turtle

1. **Circle** the words that describe what a forest is like.

2. Forest animals use living and nonliving things for _____ and _____.

3. Underline the words that tell what a wetland is.



Science Test Practice

Circle the correct answer.

4. Which animal lives in a forest?

- (A) an alligator
- (B) a bear
- (C) a dolphin



3.a. (DOK 2)

A Wetland

A **wetland** is land that is very wet.

There is water in a wetland.

Sometimes the water is salty.

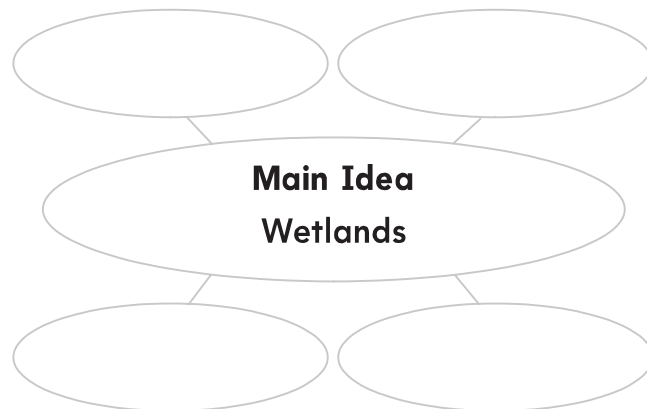
Sometimes the water is not salty.



There is mud in a wetland.
There are plants
in a wetland, too.



5. What kinds of things can be in a wetland?



Use the Activity Card **Chart Habitats**.

 1.e., 3.a.

I Wonder . . . Alligators live in wetland areas.

Could an alligator live in a forest? Explain.

Directed Inquiry

Flip Chart p. 10

Compare Animals

Compare animals and sort them into groups based on their similarities.

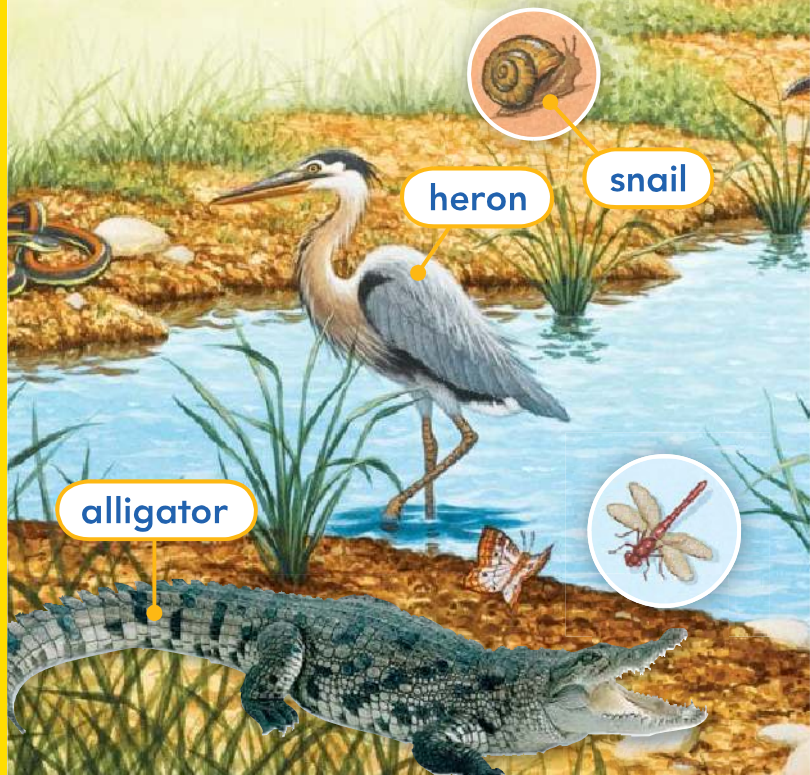


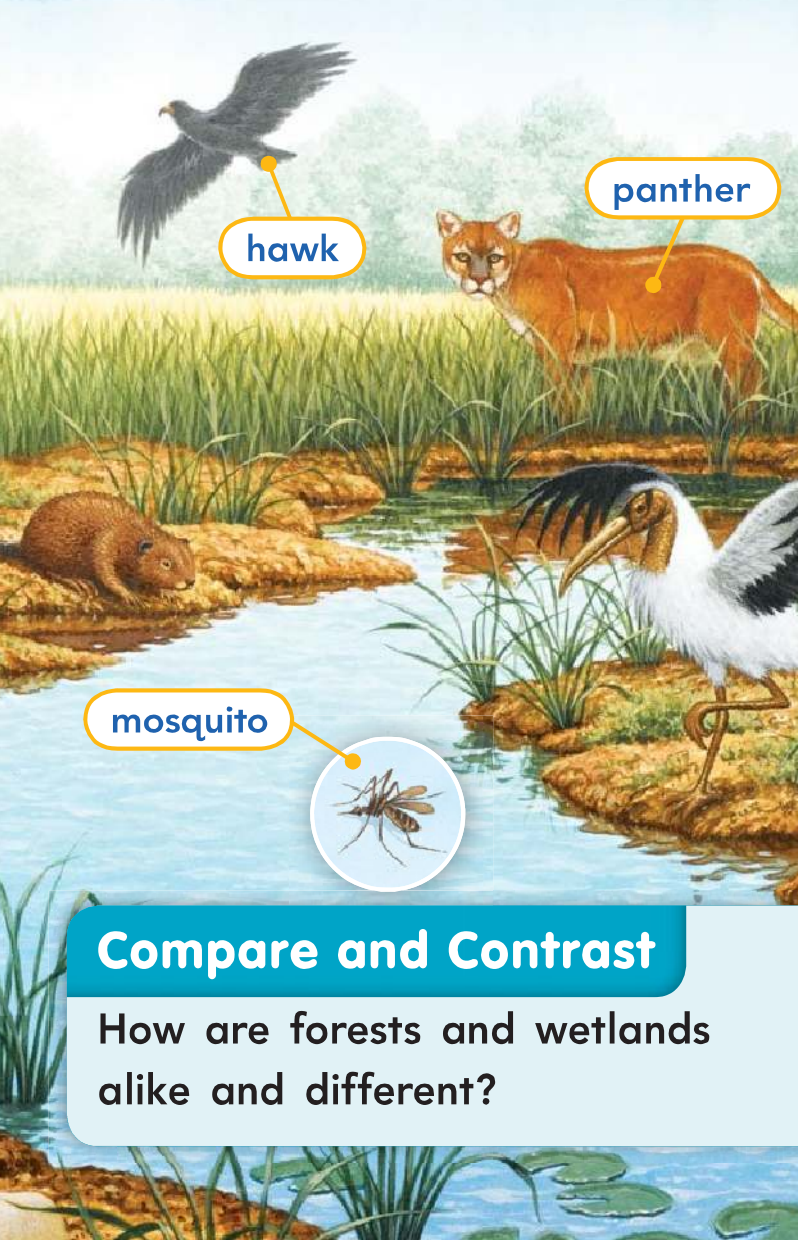
1.b., 1.e., 2.a., 3.a.

There are many kinds of animals in a wetland.

The animals find food and water in the mud, water, and plants.

They find shelter in the mud, water, and plants.





Summary

Plants and animals live in different places.

List three animals that live in a forest.

Compare and Contrast

How are forests and wetlands alike and different?

Alike	Different

Compare and Contrast

How are forests and wetlands alike and different?

KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

2 Many animals eat _____

_____.

3 Forest animals use living and nonliving things to meet their _____.

4 Wetland animals find food and shelter in the mud, water, and _____.

KWL

What Did You Learn?



Science Test Practice

1 Which words describe a living thing?

(A) does not grow and change

(B) needs food and water

(C) does not need food and water



3.e. (DOK 1)

2 What do most animals eat?

3 How does a forest help animals meet their needs?

4 Where do wetland animals find food and shelter?

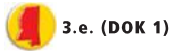
Draw a picture to show what you know about living and nonliving things.



Circle the correct answer.

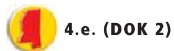
1. Why does a plant need light, water, and air?

- (A) to hold it up
- (B) to make seeds
- (C) to make food

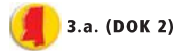


2. Which describes how energy from the Sun is used?

- (A) A deer drinks from a stream.
- (B) A bird eats a fish.
- (C) A plant makes its own food.

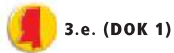


3. Which animal lives in a wetland?



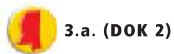
4. Which do animals need to grow?

- (A) light
- (B) food
- (C) warmth



5. Which best tells about forest animals?

- (A) They find shelter in mud.
- (B) They find shelter in trees.
- (C) They swim to find food.



6. Look at the picture.



Rita placed her plant in a sunny window. What else must she do to take care of her plant?

- (A) Give the plant water.
- (B) Give the plant shelter.
- (C) Give the plant food.



KWL

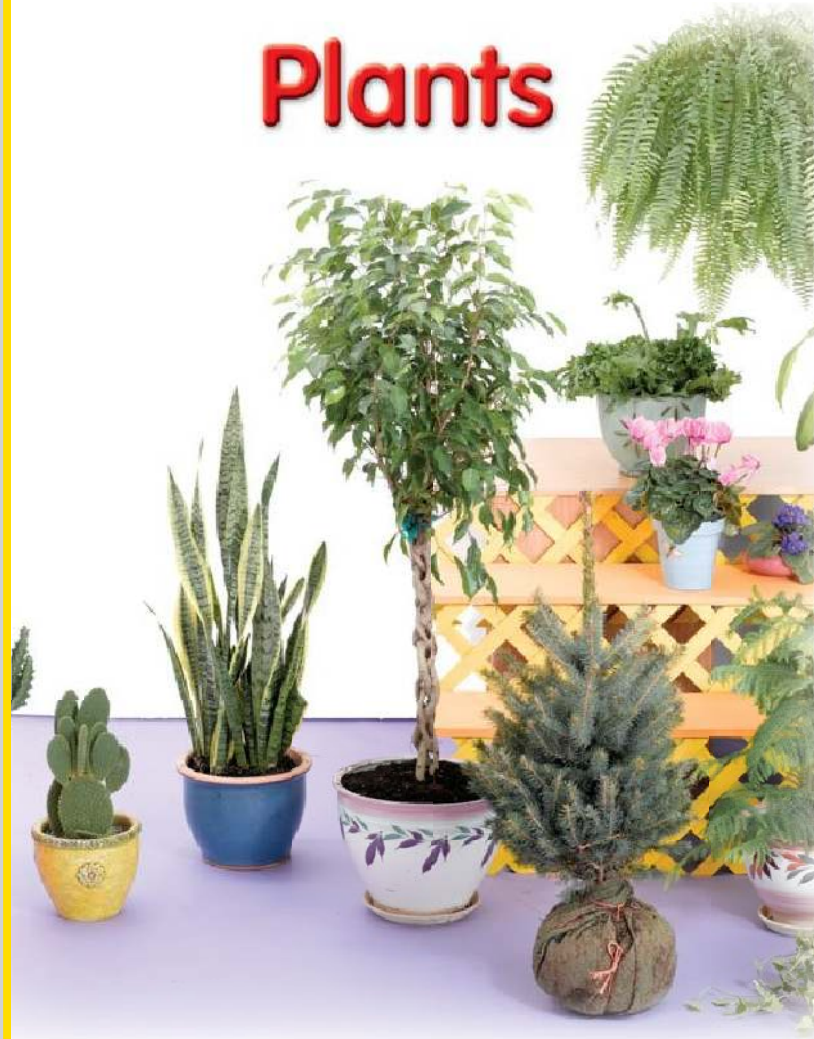
What Do You Know?

Talk with a partner.

List what you know about plants.

What plants do you see here?

Plants





Contents

- 1 What Are the Parts of Plants?98
- 2 How Can Plants Be Sorted? 102
- 3 How Do Plants Change as They Grow? 106

KWL

What Do You Want to Know?

Think about what you need to live.

What might a plant need?

What do you wonder about plants?

VOCABULARY


flower The part of a plant that makes seeds. (*noun*)

leaf The part of a plant that makes food for the plant. (*noun*)

root The part of a plant that takes in water from the ground. (*noun*)

seed The part of a plant that has a new plant inside it. (*noun*)

stem The part of a plant that connects the roots to the other plant parts. (*noun*)

-  **2.a.** Recognize that most things are made of parts. (DOK 1)
3.f. Identify and label the parts of a plant. (DOK 2)

1

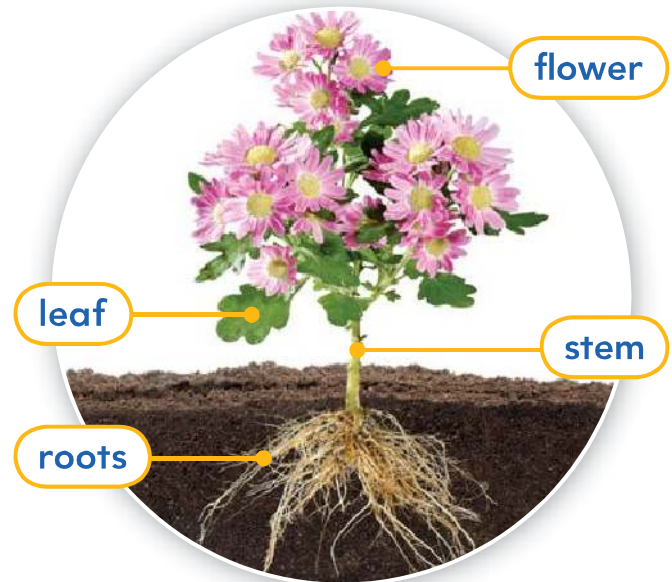
What Are the Parts of Plants?

Plants have parts.

Plants have roots, stems, and leaves.

Some plants have flowers.

Each part helps in a different way.



Roots and Stems

Roots take in water.

Roots hold the plant in the ground.

A **stem** joins parts of plants.

Stems carry water from the roots to other parts.

Stems hold the plant up.



1. Which part of the plant takes in water and holds the plant in the ground?

2. **Circle** the stem in the picture on this page.



Use the Activity Card **Be a Plant Expert**.



1.e., 3.f.

Directed Inquiry

Flip Chart p. 11

Observe a Plant

Observe a plant and tell about its parts.



1.c., 1.e., 3.f.



Circle the correct answer.

3. What might happen if a plant lost its leaves?

- (A) It could not make food.
- (B) It could not stay in the ground.
- (C) It could not stand up.



3.f. (DOK 2)

4. How are leaves alike and different?

Alike	Different
most plants have leaves	

Leaves

Most plants have leaves.

Leaves make food for the plant.

Leaves also make oxygen.

People and animals need oxygen.



Flowers and Seeds

Many plants have flowers.

A **flower** makes seeds.

A **seed** has a new plant inside it.

New plants grow from seeds.



seeds

Draw Conclusions

Why are seeds important?

Summary

Which plant part makes seeds?

▶ Draw Conclusions

Why are seeds important?

Fact

Flowers make _____.

Fact

Seeds have new _____ inside.

Conclusion

Seeds are important because

_____ grow from seeds.

VOCABULARY

spines Sharp points on a cactus.
(*noun*)

VOCABULARY ACTIVITY

Use Words

spines

Circle the words on this page that help you know what the word **spines** means.



3.a. Classify animals and plants by observable features (e.g., size, appearance, color, motion, habitat). (DOK 2)

2

How Can Plants Be Sorted?

You can sort plants.

You can put plants in groups.

You can sort plants

by their parts.

Some plants have sharp points called **spines**.

spines

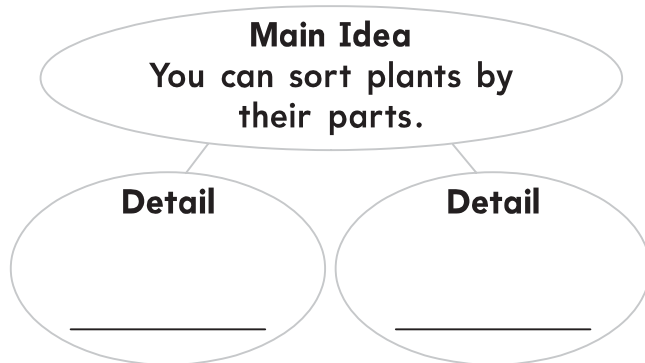


Some plants have flowers.
Some plants have flat leaves.



I Wonder . . . I know that some plants have spines.
How do you think spines help plants?

I. How can you sort plants?





Science Test Practice

Circle the correct answer.

2. Which plant is safe to eat?

- (A) bush
- (B) lettuce
- (C) pine tree



3.a. (DOK 2)

Directed Inquiry

Flip Chart p. 12

Compare Leaves

Compare leaves and group them according to how they are alike. Make crayon rubbings of each group.



1.b., 1.e., 3.a.

Eating Plants

Some plants are food for people. You can buy food plants in a store.

These plants are safe to eat. Not all plants are safe to eat.



Some plants are food for animals.



Draw Conclusions

How do plants help animals?

Summary

You can group plants by their parts.

Some animals eat plants.

Tell about two of these animals.

▶ Draw Conclusions

How do plants help animals?

Fact

Many plants are _____ to eat.



Conclusion

Some plants are food for _____.

VOCABULARY

cone The part of some trees, such as pine trees, where seeds grow. *(noun)*

life cycle The order of changes that happen in the lifetime of a plant or animal. *(noun)*

seedling A young plant. *(noun)*



2.a. Recognize that most things are made of parts. (DOK 1)

3.f. Identify and label the parts of a plant. (DOK 2)

3

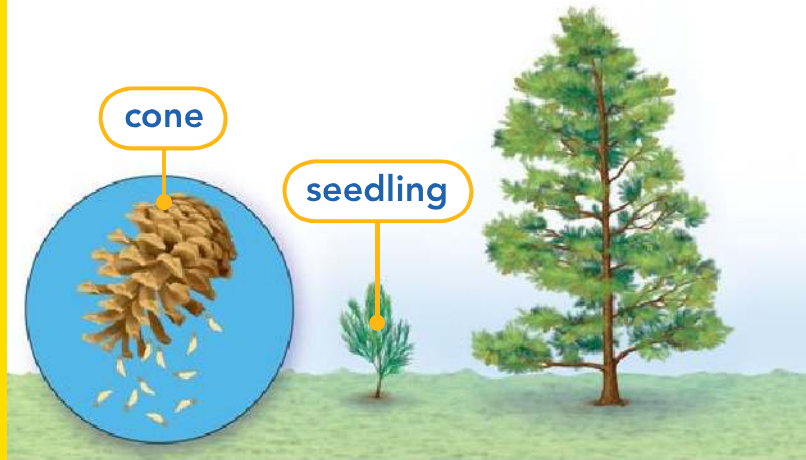
How Do Plants Change as They Grow?

Pine trees start as seeds.

Pine seeds are in a **cone**.

A seed grows into a plant called a **seedling**.

The seedling grows into a tree.



The tree grows cones.
Seeds are in the cones.
Pine trees start as seeds!



Science Test Practice

Circle the correct answer.

1. How is a pine tree different from a pine seedling?
 - (A) It has needles.
 - (B) It is larger.
 - (C) It started as a seed.

3.f. (DOK 2)

2. How does a pine tree grow?

Cone makes seeds.



Seed grows into a _____.



Seedling grows into a tree with _____.

I Wonder . . . Plants need to meet their needs in order to change and grow.

What could happen if a seedling did not get the water, air, and sunlight it needs?

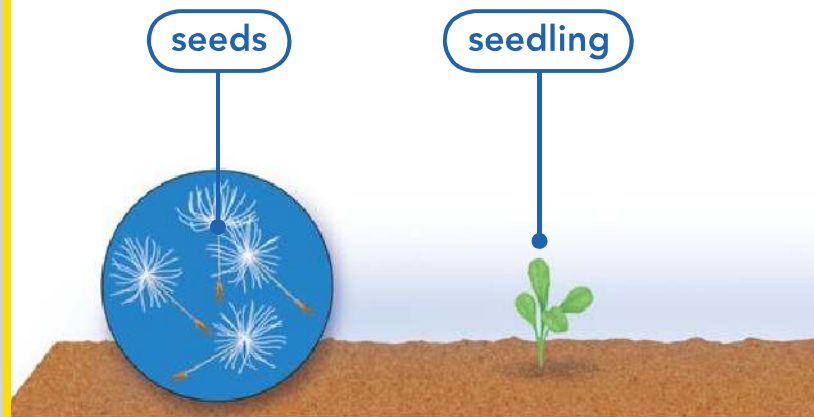


Use the Activity Card **Order a Plant Life Cycle**.

 1.b., 1.e., 3.f.

Plant Life Cycles

Plants change as they grow. Changes in plants and animals happen in an order called a **life cycle**.



Plant Lives

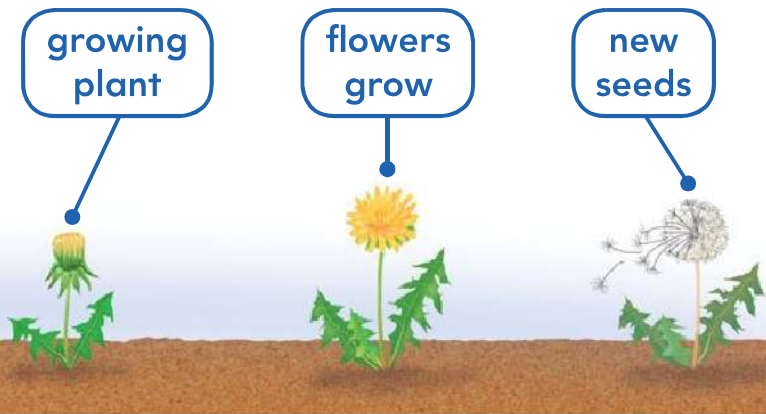
Different plants have different life cycles.

Some plants have long life cycles.

Some plants have short life cycles.

Sequence

What comes after the seed in a plant's life cycle?



Summary

Plants grow and change.

How is the pine tree's life cycle different from the plant's life cycle on these two pages?

Sequence

What comes after the seed in a plant's life cycle?

seed

adult plant

new seeds

KWL

What Did You Learn?



Science Test Practice

1 **Circle** the correct answer.

2 Roots help a plant _____.
They also hold the plant in the ground.

3 One way to sort plants is _____

4 After flowers grow, _____

KWL

What Did You Learn?



Science Test Practice

1 What does this plant part do?



- (A) It takes in water.
- (B) It makes food.
- (C) It holds the plant up.



3.f. (DOK 2)

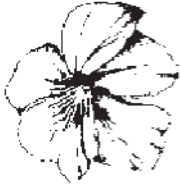
- 2 How do roots help a plant?
- 3 What is one way to sort plants?
- 4 What happens in a plant's life cycle after flowers grow?

Draw a picture to show what you know about plants.




Circle the correct answer.

1. Look at the picture.




What does this plant part do?

- (A) It makes food.
- (B) It joins the parts of the plant.
- (C) It makes seeds.

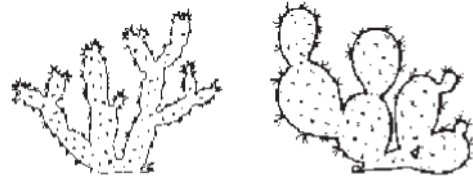
 3.f. (DOK 2)

2. What might seeds from a cone grow to be?

- (A) flower
- (B) grass
- (C) pine tree


 3.a. (DOK 2)

3. Look at the pictures.



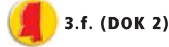
How might you classify these plants?

- (A) plants with flat leaves
- (B) plants with spines
- (C) plants that are safe to eat

 3.a. (DOK 2)

4. Which is the correct order of a plant's life cycle?

- (A) seed, adult plant, seedling
- (B) seed, seedling, adult plant
- (C) seedling, seed, adult plant

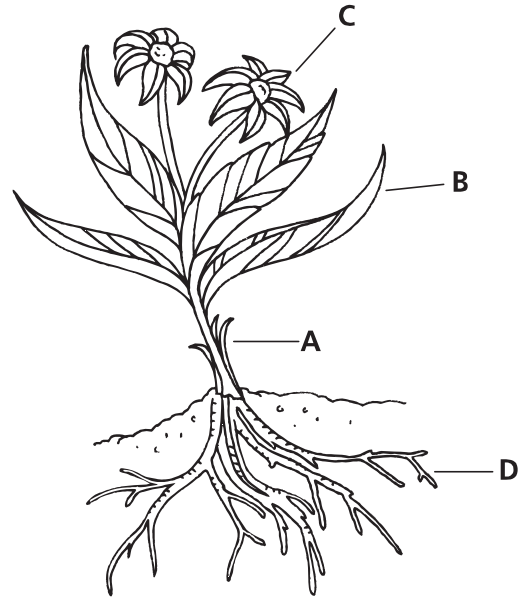


5. Which plant part takes in water from the ground?

- (A) flower
- (B) root
- (C) stem



6. Look at the picture.



What does Part B do?

- (A) It takes in water.
- (B) It joins the parts of the plant.
- (C) It makes food.

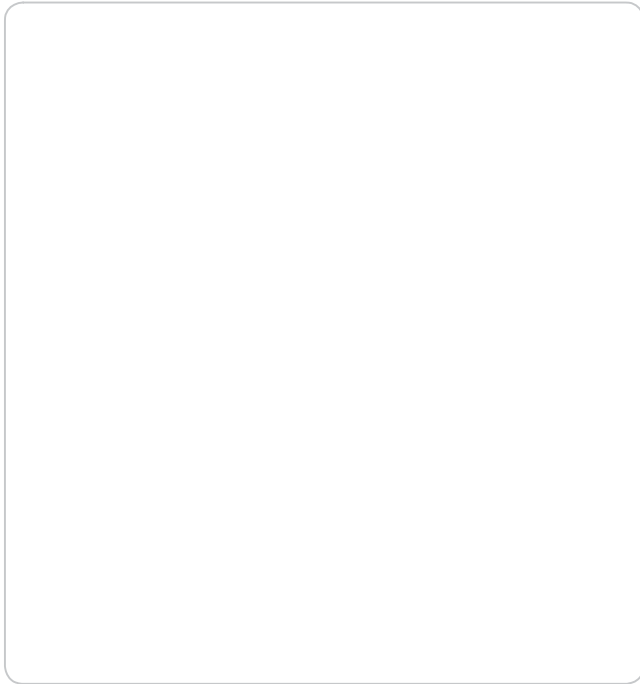


KWL

What Do You Know?

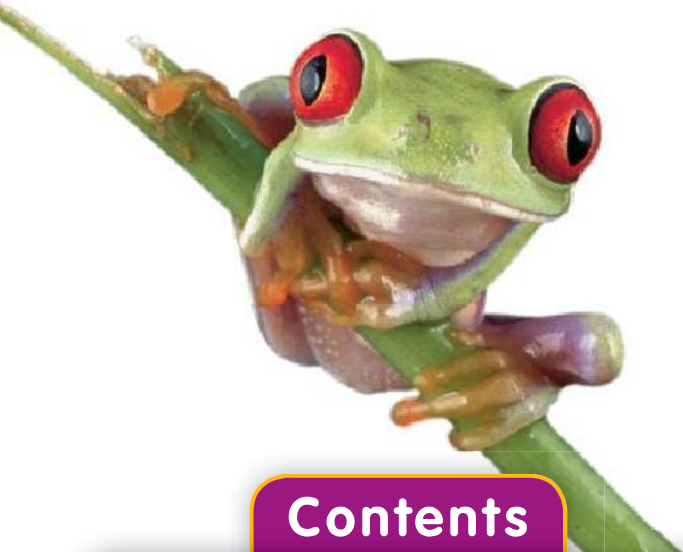
Draw an animal you know.

Label some of its body parts.



Animals





Contents

- 1 How Are Animals Grouped? 116
- 2 How Do Animals Grow and Change? 122
- 3 How Do Animals Use Their Parts? 130
- 4 How Do Our Bodies Work? 134

KWL

What Do You Want to Know?

What do you wonder about animals?

VOCABULARY

amphibian An animal that has wet skin with no hair, feathers, or scales. (*noun*)

gills Body parts that help a fish breathe under water. (*noun*)

lungs Body parts that take in air. (*noun*)

mammal An animal that has hair or fur.

A baby mammal drinks milk from its mother. (*noun*)

reptile An animal that has dry skin with scales. (*noun*)



2.a. Recognize that most things are made of parts. (DOK 1)

3.a. Classify animals and plants by observable features (e.g., size, appearance, color, motion, habitat). (DOK 2)

3.b. Describe the primary function of the major body organs (brain, skin, heart, lungs, stomach, intestines, bones, and muscles). (DOK 2)

1

How Are Animals Grouped?

Scientists study animals.
They put animals into groups.



Mammals

One group is called mammals.

A baby **mammal** drinks milk from its mother.

Most mammals have hair or fur.

Mammals have lungs.

Lungs help mammals breathe.



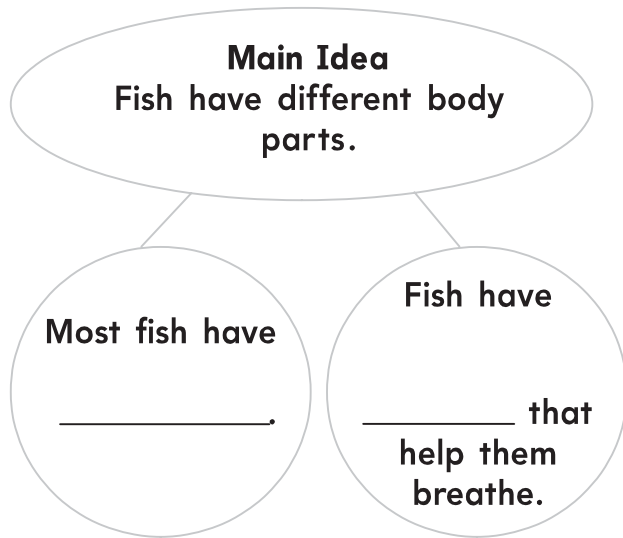
1. Draw a picture of a mammal.
Label it.

A large, empty rectangular box with rounded corners, intended for a student to draw a picture of a mammal.

2. Tell how you know the animal you drew is a mammal.

3. Underline three sentences on this page that tell about birds.

4. Name two body parts that fish have.



Birds and Fish

Another group is birds.

Birds have wings.

Birds have feathers.

Birds have lungs to breathe.

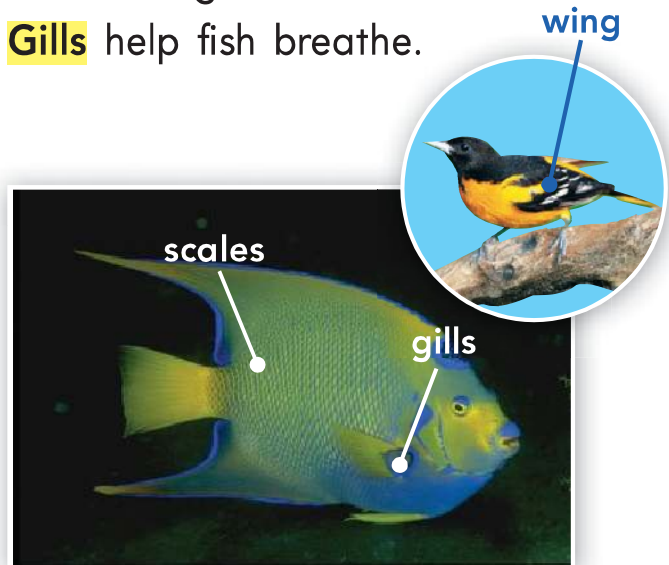
Another group is fish.

Fish live in water.

Most fish have scales.

Fish have gills.

Gills help fish breathe.



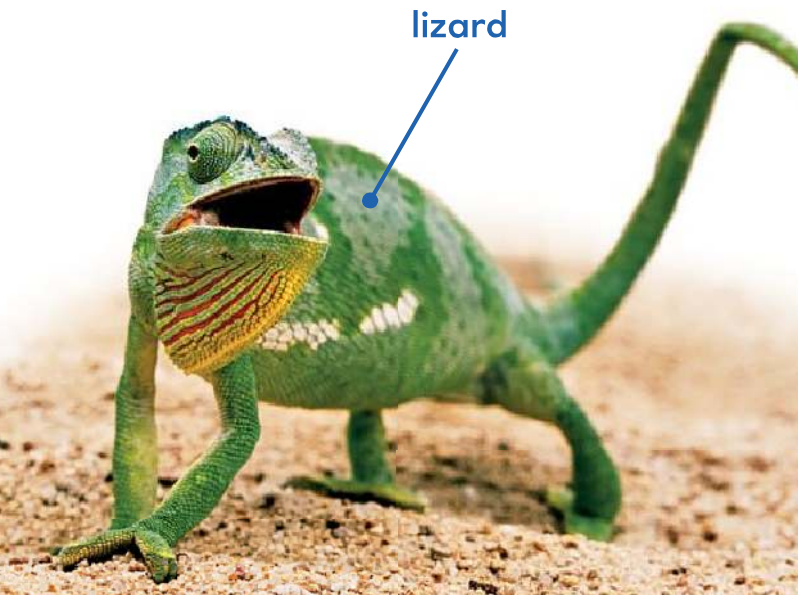
Reptiles

Another group is reptiles.

A **reptile** has dry skin with scales.

Snakes are reptiles.

Lizards are reptiles.



5. A reptile has _____

_____.



Science Test Practice

Circle the correct answer.

6. What animal has dry skin with scales?

(A) lizard

(B) bird

(C) fish



3.a. (DOK 2)

7. **Circle** the words that tell what an amphibian looks like.

I Wonder . . . Amphibians have wet skin.

Where do you think most amphibians live? Explain.

Directed Inquiry

Flip Chart p. 13

Classify Animals

Classify animals into groups based on how they are alike. Make a graph showing the number of animals in each group.



1.b., 1.e., 3.a.

Amphibians

Another group is amphibians.

An **amphibian** has wet skin.

It does not have hair or scales.

It does not have feathers.

Frogs are amphibians.



What Animals Eat

You can group animals by what they eat.

Some animals eat plants.

These animals have flat teeth.

Some animals eat other animals.

These animals have sharp teeth.



flat teeth



sharp teeth

Compare and Contrast

How are the teeth of animals different?

Summary

You can sort animals into groups—

mammals, birds, _____,

_____, and amphibians.

You can also sort animals by what

they _____.

Compare and Contrast

How are the teeth of animals different?

Flat Teeth	Sharp Teeth
for eating	for eating
_____	_____

VOCABULARY

adult A full-grown plant, animal, or person. (*noun*)

larva The stage of some animals, like insects, after the egg stage. (*noun*)

pupa The part of a life cycle where a caterpillar changes into a butterfly. (*noun*)

VOCABULARY ACTIVITY

Use Syllables

adult Break the word **adult** into syllables. How many syllables does **adult** have?

2

How Do Animals Grow and Change?

Living things change as they grow.

The order of changes is called a life cycle.

An **adult** is a full-grown plant, animal, or person.

Life Cycle of a Salamander

eggs

ready to hatch



Adult animals can become parents. A new life cycle begins when an adult has its own young.

growing

adult



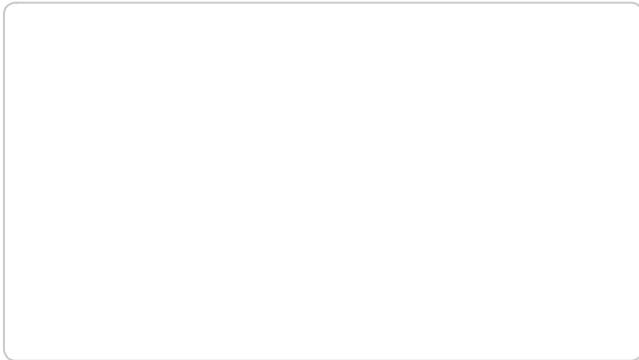
1. When does a new life cycle begin?

2. Do humans go through a life cycle? Explain.

3. A bird's life cycle starts as

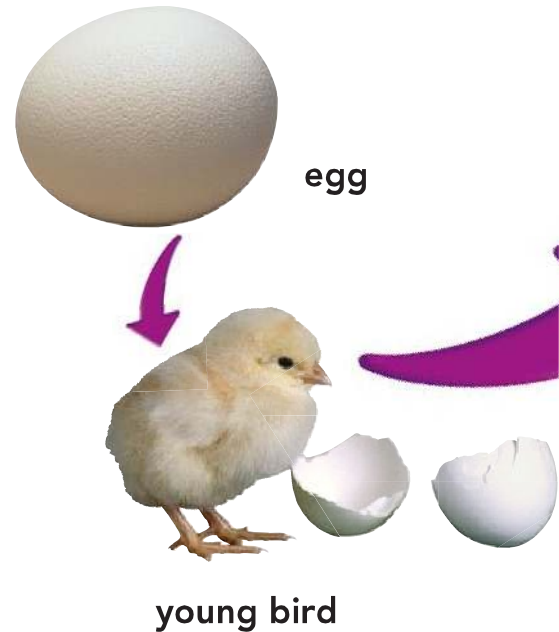
_____.

4. Draw a picture of another animal whose life cycle starts as an egg.



The Life Cycle of a Bird

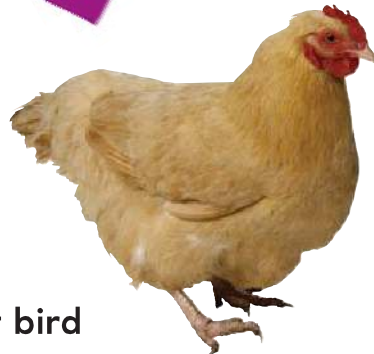
A bird's life cycle starts as an egg. A young bird grows inside the egg. The young bird comes out of the egg.



The young bird grows and gets new feathers.
The young bird becomes an adult.
It can reproduce.



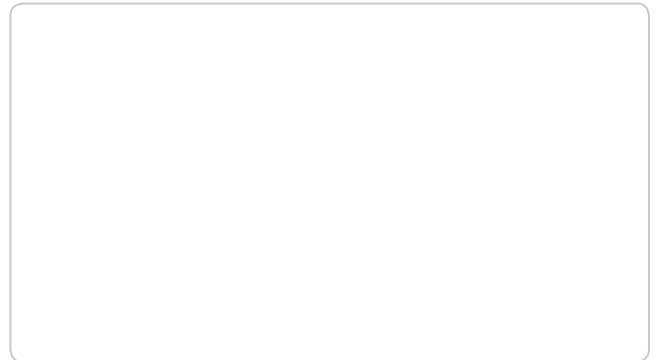
growing bird



adult bird

5. What can a bird do when it becomes an adult?

6. Draw the life cycle of a bird.



7. Where do kittens begin growing?

I Wonder . . . A kitten grows inside its mother's body and drinks milk from her body.

What other kinds of animals do this?

The Life Cycle of a Cat

Kittens grow inside a mother cat. When the kittens are big enough, they are born.

The mother takes care of the kittens.

She feeds them with milk from her body.



mother
cat and
kittens



kitten

The kittens get bigger and stronger.
They begin to look more like their parents.
After about one year, the kittens are fully grown cats.
They can have kittens of their own.



growing cat



adult cat

8. How are kittens different from their mother?

Directed Inquiry

Flip Chart p. 14

A Cat's Life Cycle

Model a cat's life cycle to show how a cat grows and changes.




1.b., 1.e., 3.d.



Science Test Practice

Circle the correct answer.

9. Which shows the correct order of the first two stages of the butterfly life cycle?

- (A) 
- (B) 
- (C) 



3.d. (DOK 2)



Use the Activity Card **Match Animals**.



1.b., 3.d.

The Life Cycle of a Butterfly

A butterfly starts its life cycle as an egg.

A butterfly **larva**, or caterpillar, comes out of the egg.

The larva eats and grows.



egg



larva

The larva stops eating.

It becomes a **pupa** with a hard covering.

Inside, the pupa becomes an adult butterfly.

Finally, the butterfly comes out.

pupa



adult butterfly



Sequence

What part of a butterfly's life cycle comes right after the larva?

Summary

Animals grow and change as they go through their life cycles.

What changes have you gone through since you were born?

Sequence

What part of a butterfly's life cycle comes right after the larva?



VOCABULARY

fins Body parts that help a fish move. (*noun*)

wings Body parts that help animals fly. (*noun*)

VOCABULARY ACTIVITY

Use What's After

fins

The word **fins** ends in **-s**. The ending means “more than one.” Tell what **fins** means.

fins—_____



2.a. Recognize that most things are made of parts. (DOK 1)

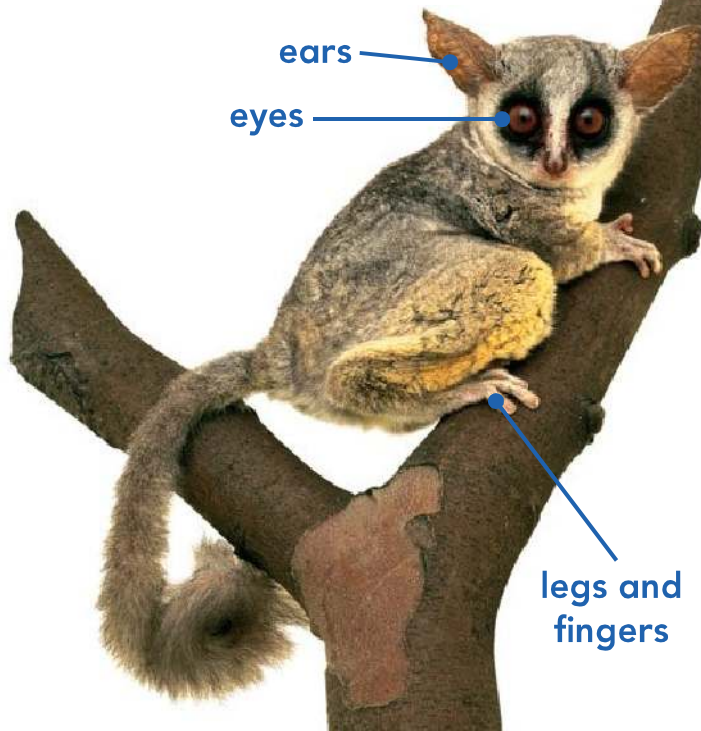
3.a. Classify animals and plants by observable features (e.g., size, appearance, color, motion, habitat). (DOK 2)

3

How Do Animals Use Their Parts?

Animals have body parts. Some body parts help them find food.

Using Body Parts to Find Food



Some body parts help animals stay safe.

Some body parts help animals hide.

Using Body Parts to Stay Safe



quills



stinger



color and shape


1. **Circle** the body parts of each animal that help it stay safe.
2. Point to the animal picture on this page that shows each of these animals—walking stick, porcupine, bee.




Use the Activity Card **Jump Like a Frog**.



3.a.

3. A  uses its _____ and _____ to move in water.

4. A  uses its _____ to fly through the air.



Science Test Practice

Circle the correct answer.

5. Look at the picture.



What do you think this animal body part is used for?

- (A) running
- (B) breathing
- (C) swimming

3.a. (DOK 2)

Parts for Moving

Animals have body parts that help them move.

A bird has wings.

Wings help it fly.

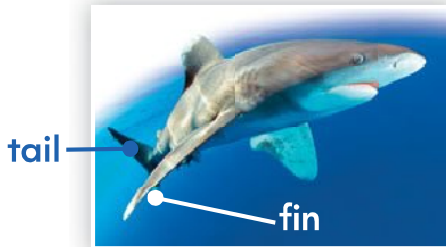
A bird has legs.

Legs help it walk and hop.

Legs help it hold on to trees.



A fish has a tail and fins.
A tail and **fins** help it move.
A lion has strong legs.
Strong legs help it run fast.



Main Idea

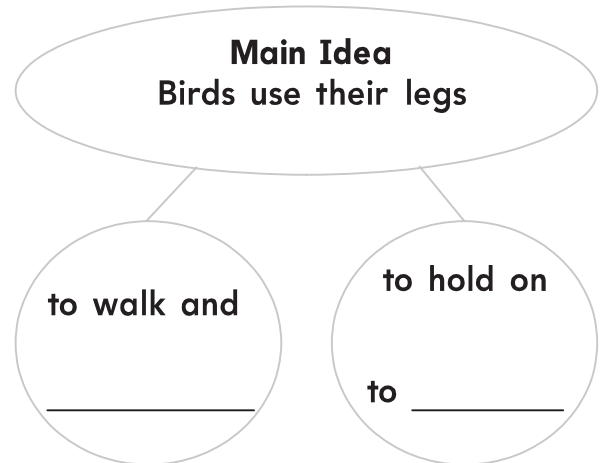
How does a bird use its legs?

Summary

Name the body parts that animals use to help them live.

Main Idea

How does a bird use its legs?



VOCABULARY

bones Body parts that hold up and protect other parts of the body. *(noun)*

brain Body part that thinks and controls the body. *(noun)*

heart Body part that pumps blood through the body. *(noun)*

intestines Body parts through which food passes. *(noun)*

muscles Body parts that help the body move. *(noun)*

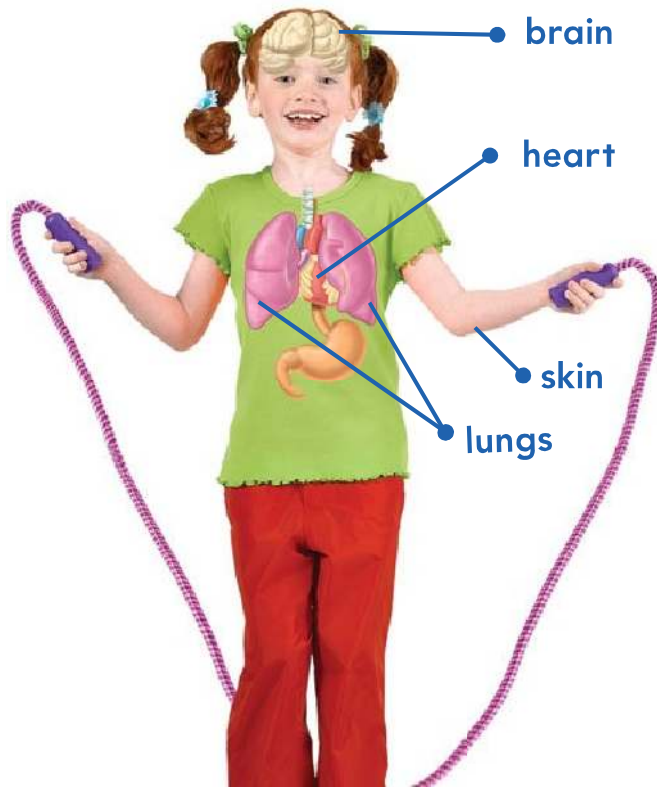
skin Body part that covers and protects the body. *(noun)*

stomach Body part that squeezes food into a thick liquid. *(noun)*

4

How Do Our Bodies Work?

Your body parts all work together. Your **brain** thinks, senses, and controls all your other body parts.



Your **heart** pumps blood to all parts of your body.

Your lungs take in oxygen from the air when you breathe.

You need oxygen to live.

Your **skin** covers your body.

Skin helps protect your body.

Skin gives you your sense of touch.

I. What does your skin do?

I Wonder . . . Lungs help you breathe. What other animals have lungs?



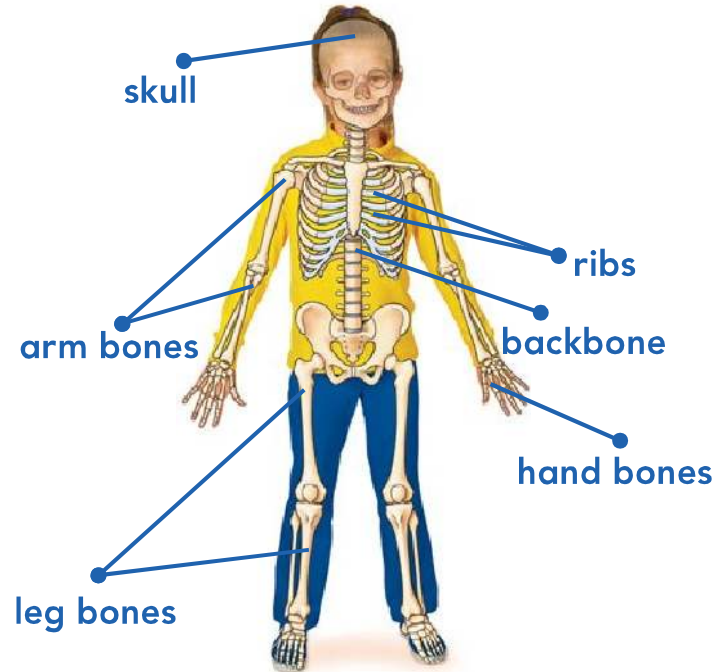
3.b. Describe the primary function of the major body organs (brain, skin, heart, lungs, stomach, intestines, bones, and muscles). (DOK 2)

3.c. Communicate the importance of food and explain how the body utilizes food. (DOK 2)

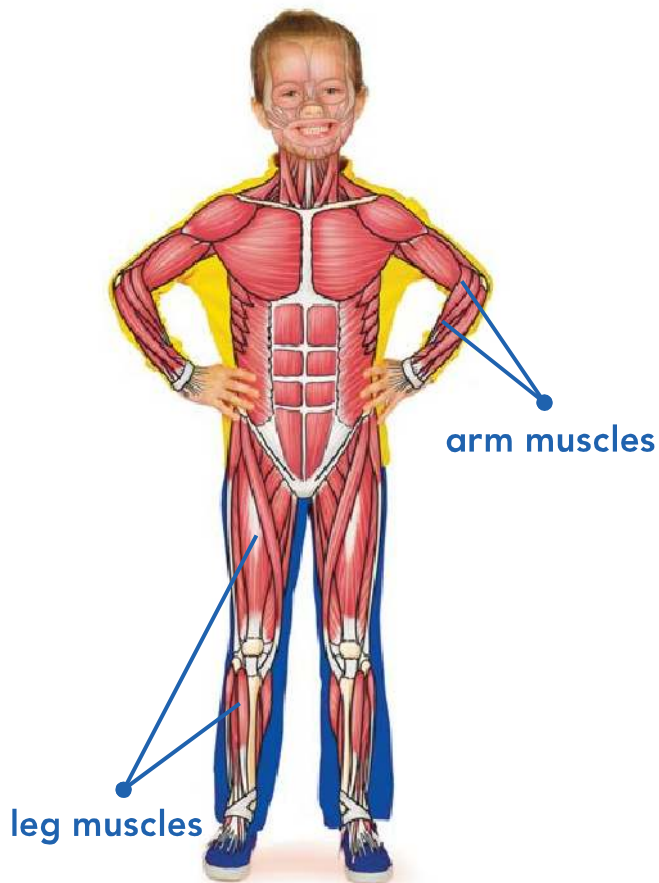
2. **Circle** the words on this page that help you understand what bones and muscles do.

3. What would happen if you did not have bones?

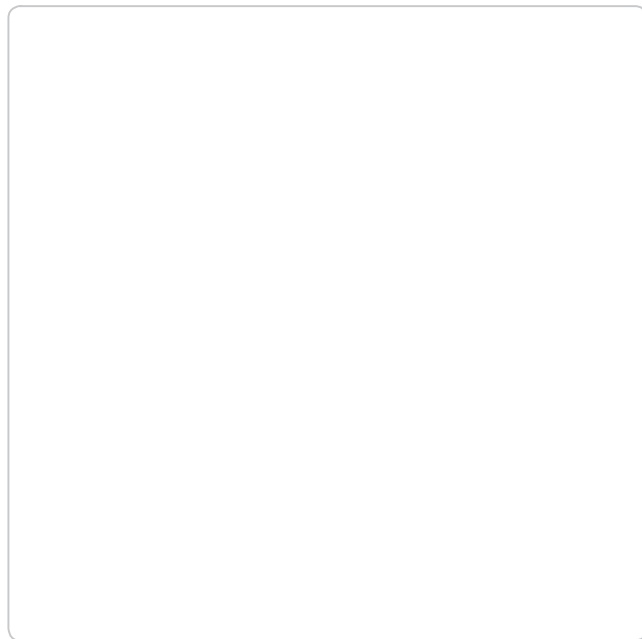
Bones and **muscles** hold you up and help you move. Some bones protect body parts. Your skull protects your brain. Ribs protect your heart and lungs.



Some muscles move your bones.
Other muscles do other jobs.
Your heart is a muscle.



4. Draw a picture to show one way you used your muscles today.



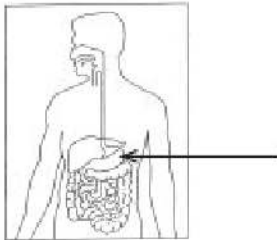
5. Why do you need to eat food?



Science Test Practice

Circle the correct answer.

6. Look at the picture.



What part of the body does the arrow point to?

- (A) stomach
- (B) large intestine
- (C) small intestine



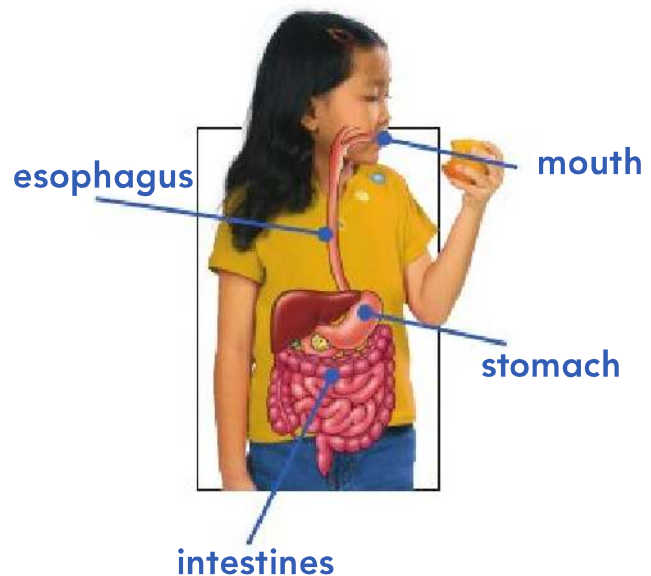
3.b. (DOK 2)

People Use Food

You need to eat healthy foods to stay healthy and strong.

Food gives you energy to move, play, think, and grow.

Your body digests, or breaks down, food so you can use it.



Muscles in your **stomach** squeeze food into a thick liquid.

The liquid moves to your **intestines**.

In your intestines, food parts your body needs go into your blood.

Food parts your body does not need move out of your body.

Sequence

What happens after the stomach squeezes food into liquid?

Summary

Your body has many parts that work together. Each part has its own job.

Which body part pumps blood through your body?

Sequence

What happens after the stomach squeezes food into liquid?

food goes into the stomach



stomach squeezes food into a liquid



needed food parts go into the blood

KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

2 A lion moves by using its strong

_____.

3 Bones and muscles

_____ you up.

4 An adult is a _____

plant, animal, or person.

KWL

What Did You Learn?



Science Test Practice

1 What does a cat's lungs help it do?

(A) digest food

(B) breathe

(C) move



3.b. (DOK 2)

2 How does a lion move?

3 What do bones and muscles do?

4 What is an adult?

Draw a picture to show what you know about animals.



Circle the correct answer.


1. Which animal is a mammal?

- (A) dog
- (B) fish
- (C) frog

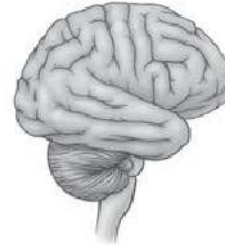
 1.b. (DOK 2), 3.a. (DOK 2)

2. Which body parts help your body use food?

- (A) bones and muscles
- (B) heart and lungs
- (C) stomach and intestines

 3.c. (DOK 2)

3. What does this body part do?



- (A) pumps blood
- (B) controls other body parts
- (C) changes food

 2.a. (DOK 1), 3.b. (DOK 2)

4. Which most likely comes first in the life cycle of a mockingbird?

- (A) It becomes an adult.
- (B) It grows inside an egg.
- (C) It comes out of an egg.



3.d. (DOK 2)

5. How is a salamander's life cycle different from a cat's life cycle?

- (A) A salamander reproduces.
- (B) A salamander grows and changes.
- (C) A salamander starts its life cycle as an egg.



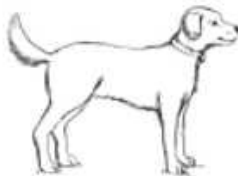
1.b. (DOK 2), 3.d. (DOK 2)

6. Which animal breathes with gills?

(A)



(B)



(C)



1.b. (DOK 2), 2.a. (DOK 1), 3.a. (DOK 2)

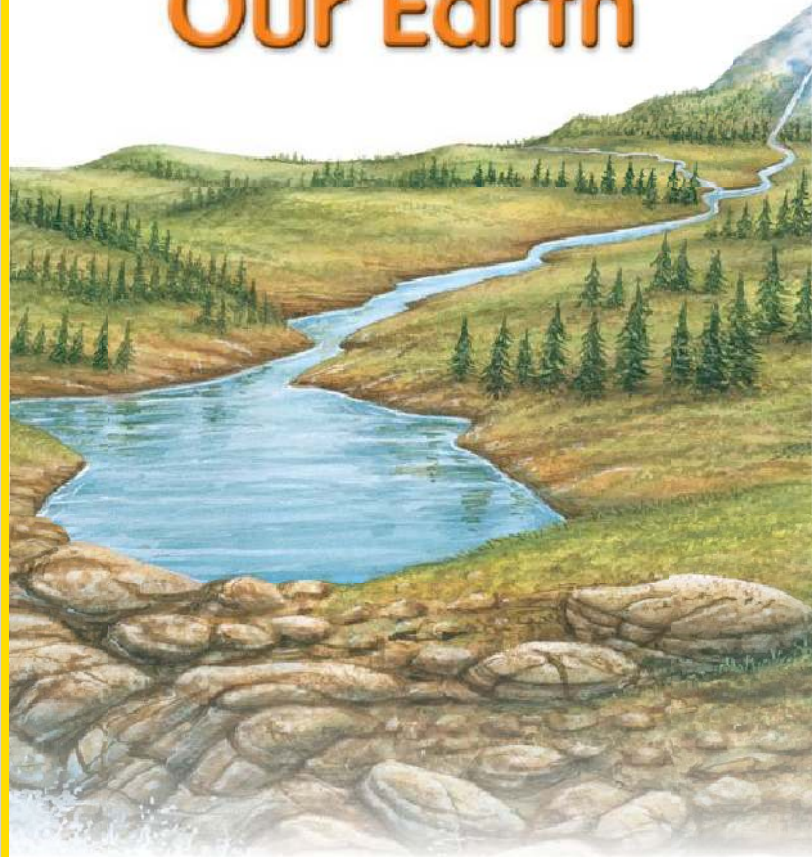
KWL

What Do You Know?

Talk with a partner.

List what you think Earth is made of.

Looking at Our Earth





Contents

- 1 What Covers Earth? 146
- 2 How Do People Use
Rocks and Minerals? 150
- 3 What Is Soil? 154

KWL

What Do You Want to Know?

What do you want to know about Earth?

How do people use things from Earth?

VOCABULARY

natural resource Something from Earth that people use.

Water is a natural resource. (*noun*)

VOCABULARY ACTIVITY

Use Words

natural resource

Circle the words on this page that help you understand what a **natural resource** is.



4.b. Identify Earth landforms and bodies of water (e.g., continents, islands, peninsulas, oceans, rivers, lakes, ponds, creeks). (DOK 1)

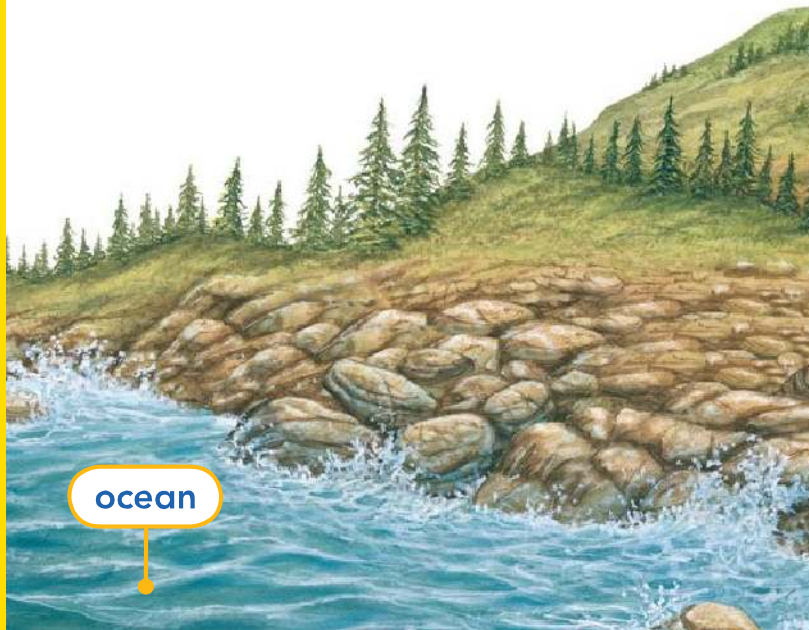
1

What Covers Earth?

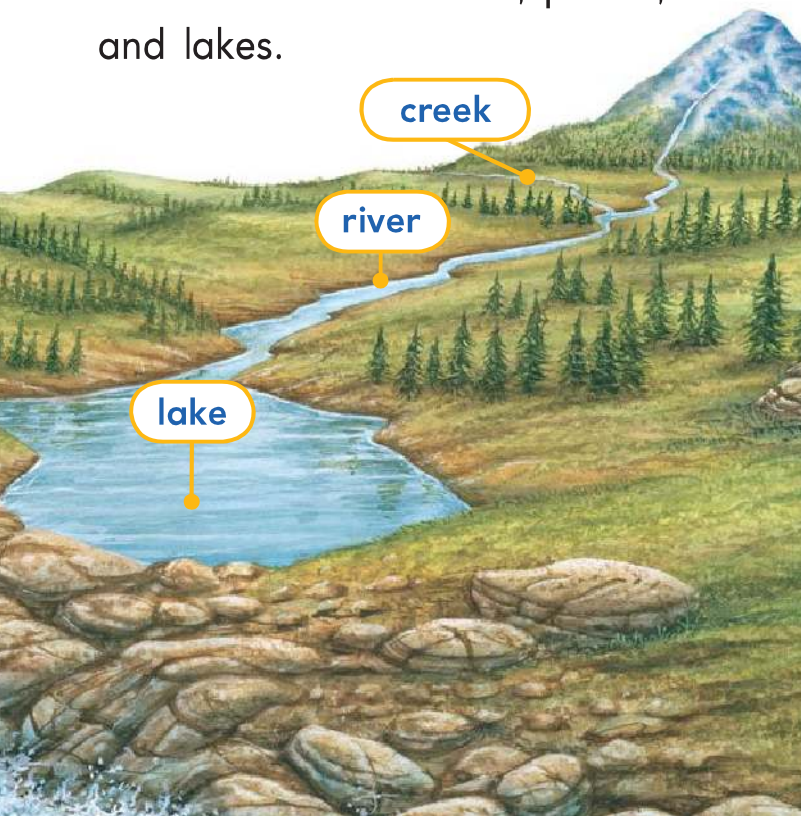
A **natural resource** is something from Earth that people use.

Water is a natural resource.

People use water in many ways.



Water covers most of Earth.
Ocean water is salty.
Fresh water is not salty.
People drink fresh water.
Fresh water is in rivers, ponds,
and lakes.



1. Look at a map. Name the ocean closest to Mississippi.

2. Name a creek, river, or lake near where you live.



Science Test Practice

Circle the correct answer.

3. Which body of water is salty?

- (A) ocean
- (B) pond
- (C) river



4.b. (DOK 1)

4. What is a continent?

5. Do you live on a continent?
What is its name? Look at a map
to help you.

Landforms

Earth has many kinds of landforms.

Each landform has a different shape.

A continent is a large piece of land surrounded by water.



continent

An island is land that has water all around it.

A peninsula is land that has water on three sides.



island



peninsula

Compare and Contrast

How are salt water and fresh water different?

Summary

Earth has many kinds of landforms and bodies of water.

What kinds of landforms and bodies of water do you see where you live?

Compare and Contrast

How are salt water and fresh water different?

Salt Water	Fresh Water

VOCABULARY

boulders Very large rocks. (*noun*)

mineral A nonliving thing found in nature.


A rock is made of one or more minerals. (*noun*)

VOCABULARY ACTIVITY

Use What's After

boulders

The word **boulders** ends in **-s**.
The ending means “more than one.”
Tell what **boulders** means.

 4.a. Compare and classify Earth materials. (DOK 1)

2

How Do People Use Rocks and Minerals?

A **mineral** is a nonliving thing found in nature.

A rock is made of one or more minerals.

Rocks and minerals are natural resources.

Minerals

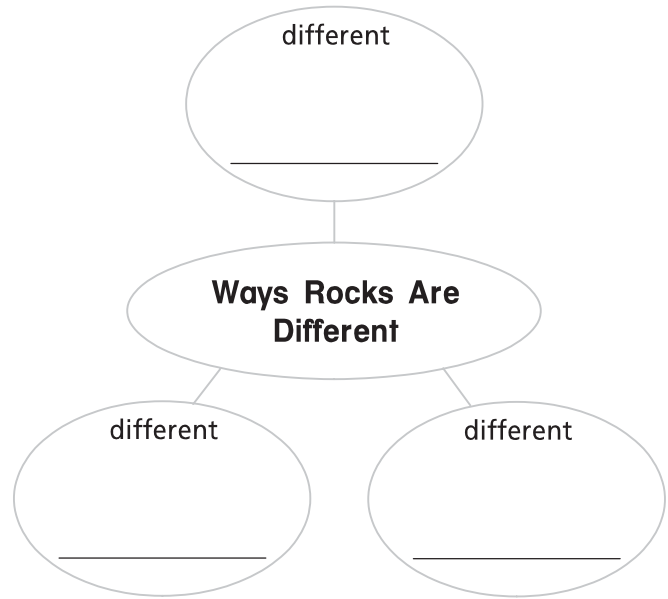


Different rocks have different minerals in them.
That is why they are different colors.
That is why they feel different.
Rocks come in many sizes.
Boulders are very large rocks.

Rocks



I. How are rocks different?



Use the Activity Card **Compare Materials**.

 1.e., 4.a.



Science Test Practice

Circle the correct answer.

2. Which of these is true of limestone?

- (A) It is soft.
- (B) It is hard.
- (C) It is used in pencils.



4.a. (DOK 1)

Directed Inquiry

Flip Chart p. 15

Compare Rocks

Observe rocks and make a plan to collect data about the rocks. Sort the rocks into groups based on how they are alike.



1.b., 1.c., 4.a.

Using Rocks and Minerals

People use rocks and minerals in different ways.

Some minerals are soft.

Graphite is a soft mineral.

People use graphite in pencils.



graphite



Some rocks are crumbly.
Some rocks are hard.
Limestone is a hard rock.
People use limestone in buildings.



limestone



Main Idea

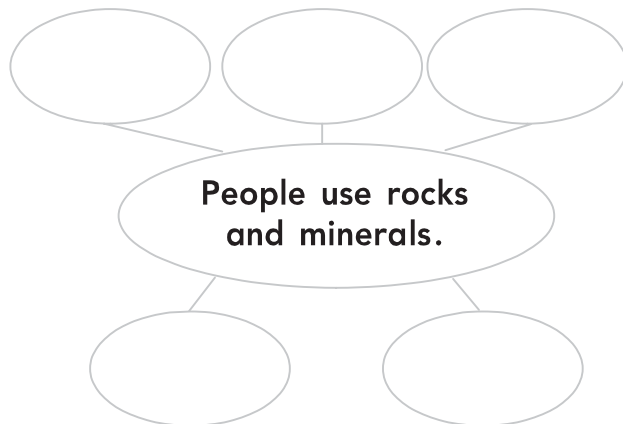
What are some ways that people use rocks and minerals?

Summary

Rocks can be used in many ways.
How are rocks used at your school?

Main Idea

What are some ways that people use rocks and minerals?



VOCABULARY

humus Bits of rotting plants and animals in soil. (*noun*)

soil The loose top layer of Earth. (*noun*)

VOCABULARY ACTIVITY

Use Syllables


humus

Break the word into syllables.

Say each syllable aloud.

Clap once for each syllable.

How many syllables are in **humus**?

 4.a. Compare and classify Earth materials. (DOK 1)

3 What Is Soil?

Soil is the loose top layer of Earth.

Soil is made of bits of minerals and rocks.

A soil may be dark or light.

A soil may feel powdery or sticky.

It may have a strong smell.

Kinds of Soil

Topsoil



Clay Soil



Soil is made of bits of rotting plants and animals. Bits of rotting plants and animals are called **humus**. Soil has air and water in it, too. All the things in soil help plants grow.

Sandy Soil



1. Write three kinds of soil.



Science Test Practice

Circle the correct answer.

2. What is made up of bits of rotting plants and animals?

- (A) clay
- (B) sand
- (C) humus



4.a. (DOK 1)

3. What are two other natural resources besides soil?

4. What might happen if a plant did not have soil?

It might not be able to _____.



Use the Activity Card **Compare Soils**.

 1.b., 1.c., 4.a.



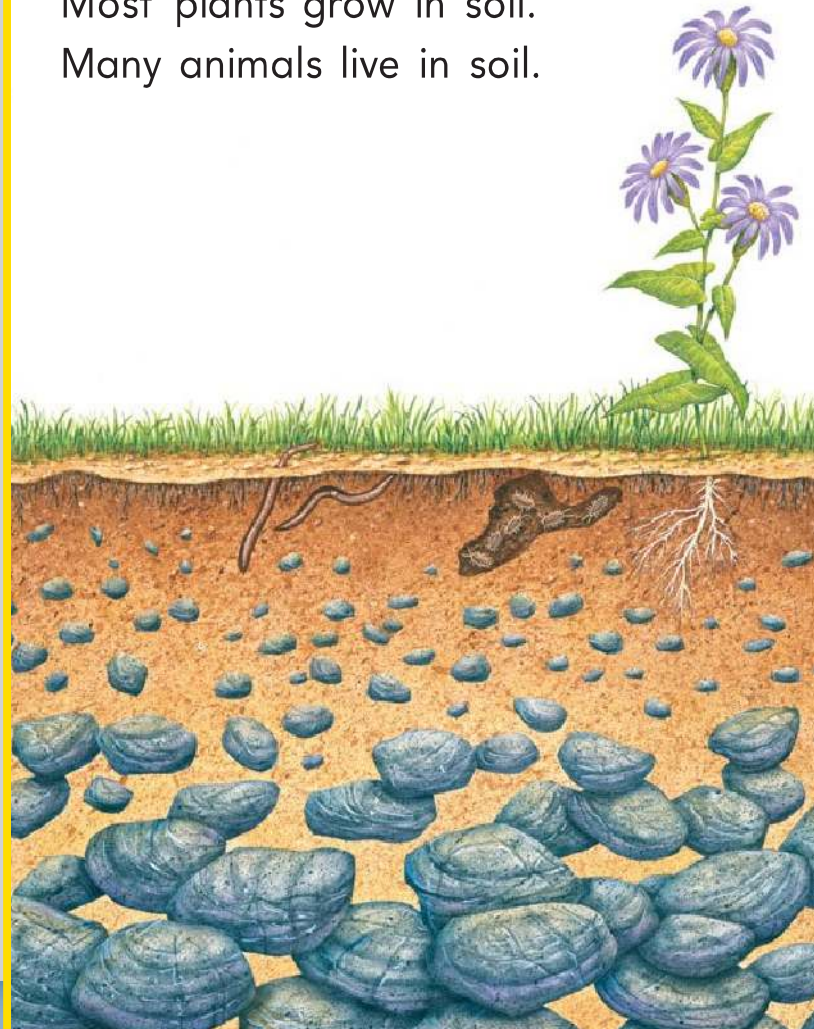
Flip Chart p. 16

Observe Soil

Use senses to make observations about soil.

 1.c., 4.a.

Soil is a natural resource.
Most plants grow in soil.
Many animals live in soil.



Animals dig in soil.
They break soil in small pieces.
This helps the soil.
It makes room for air and water
to get into the soil.

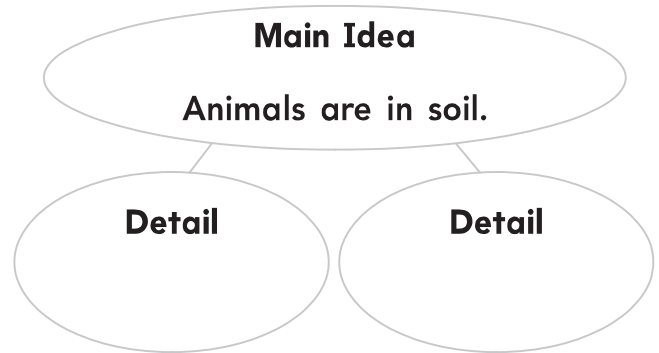


earthworm



wood lice

5. What animals might you find in soil?



I Wonder . . . I know animals dig in soil and this helps the soil.

What might happen if the animals did not dig in the soil?

The soil might not get the

_____ and _____ that plants and animals need.

Summary

Soil is an important natural resource.

What are some ways we can help save soil?

▶ Cause and Effect

What causes soil to go away?

Cause

Effect



Saving Soil

We need to save soil.

Water can take soil away.

Wind can take soil away.

Plants can save soil.

Plant roots hold soil in place.

soil with plants



soil without plants



Cause and Effect

What causes soil to go away?

KWL

What Did You Learn?



Science Test Practice

❶ Which kind of land has water on three sides?

- Ⓐ island
- Ⓑ peninsula
- Ⓒ continent



4.b. (DOK 1)

- ❷ What covers most of Earth?
- ❸ Why are some rocks different colors?
- ❹ What makes up humus?

KWL

What Did You Learn?



Science Test Practice

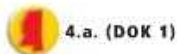
❶ Circle the correct answer.

- ❷ _____ covers most of Earth.
- ❸ Some rocks are different colors because different rocks have different _____ in them.
- ❹ Humus is made up of bits of rotting _____ and _____.

Circle the correct answer.

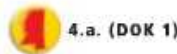
1. Which part of soil has pieces of dead plants and animals?

- (A) clay
- (B) humus
- (C) sand



2. Why are rocks different colors?

- (A) because they are different sizes
- (B) because they have different weights
- (C) because they have different minerals in them

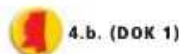


3. Look at the picture.




What kind of landform are these?

- (A) continents
- (B) islands
- (C) peninsulas




4. Which body of water is salty?

- Ⓐ creek
- Ⓑ lake
- Ⓒ ocean

 4.b. (DOK 1)

5. Why does soil help plants grow?

- Ⓐ It is sandy.
- Ⓑ It has air and water in it.
- Ⓒ It has a strong smell.


 4.a. (DOK 1)

6. Look at the building in the picture.



What was most likely used to build it?

- Ⓐ hard rock
- Ⓑ crumbly rock
- Ⓒ soft mineral

 4.a. (DOK 1)

KWL

What Do You Know?



Talk with a partner.

List some ways you use air and water.

Caring for Our Earth





- Turn off water while you brush your teeth. 
- Use paper and plastic bags more than one time. 
- Write or draw on both sides of paper. 

Contents

- 1 How Do We Use Air? 164
- 2 How Do We Use Water? 168
- 3 How Do We Use Land? 172

KWL

What Do You Want to Know?

Look at the boy's list. How else can you take care of Earth?

VOCABULARY


air pollution Harmful things that get into the air. (*noun*)

VOCABULARY ACTIVITY

Use Pictures

air pollution

Turn to page 166. Use clues from the pictures on the page to understand what **air pollution** means.

 **4.d.** Categorize types of actions that cause water, air, or land pollution. (DOK 2)

1

How Do We Use Air?

Air is a natural resource.
People need air to live.
Animals need air to live.
Plants need air to live, too.
This boy uses air to
blow bubbles.



People use air in many ways.
You use air to cool off
on a hot day.
This boat uses air
to move across water.



1. How do people use air?

2. Draw a picture of one way you
use air.



Use the Activity Card **Observe Air**.



1.e.

3. Circle words on this page that tell about air pollution.



Science Test Practice

Circle the correct answer.

4. Which causes air pollution?

- (A) smoke from fires
- (B) moving air
- (C) warm air



4.d. (DOK 2)

Directed Inquiry

Flip Chart p. 17

Collect Pollution

Collect and observe pollution.



1.b., 1.c., 1.e., 1.f., 4.d.

Air Pollution

Air pollution happens when harmful things get into the air. Dust and smoke are pollution. Dust comes from buildings. Smoke comes from fires. Pollution can make living things sick.



air pollution



clean air

Clean air helps living things stay healthy.
Clean air keeps buildings and other things clean.
Pollution makes things dirty.
This man is cleaning up pollution.



Draw Conclusions

Why is air important?

Summary

People use air in many ways.
Air pollution happens when harmful things get into the air.

How does air pollution affect living things?

Draw Conclusions

Why is air important?

Air is a natural _____.

People use air in many _____.

Air is important because people need air to _____.

VOCABULARY

water pollution Harmful things that get into water. (*noun*)


VOCABULARY ACTIVITY

Use Words

water pollution

Turn to page 170. What words on the page help you understand what **water pollution** is?

Circle them.

 **4.d.** Categorize types of actions that cause water, air, or land pollution. (DOK 2)

2

How Do We Use Water?

Water is a natural resource. People need water to live. You use water to drink. You use water to wash. You use water to cook and clean.



People use water in other ways.
You use water to swim
and have fun.
People use water to put out fires.



1. How do people use water?

2. Draw a picture of one way you use water.

A large, empty rounded rectangle with a thin black border, intended for a student to draw a picture of one way they use water.

Use the Activity Card **Categorize Water Uses.**

 1.b.

3. Why is water pollution harmful?



Science Test Practice

Circle the correct answer.

4. Which is a way a river might become polluted?

- (A) People clean up oil in the river.
- (B) Fish swim in the river.
- (C) People throw trash in the river.



4.d. (DOK 2)

Water Pollution

Water pollution happens when harmful things get into water. Trash in water is a harmful thing. Oil in water is a harmful thing. Pollution can make living things sick.



cleaning oil off a bird



water pollution

People can help clean up pollution. They can pick up trash. They can stop putting it into the water.



Classify

What are three ways people use water?

Summary

People use water in many ways. Water pollution happens when harmful things get into water.

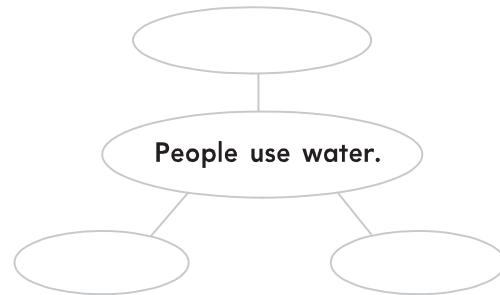
List two harmful things that can get into water.

a. _____

b. _____

Classify

What are three ways people use water?



VOCABULARY

land pollution Waste that causes harm to land. (*noun*)

VOCABULARY ACTIVITY

Use Syllables

land pollution

Break the term **land pollution** into syllables.

Say each syllable aloud.

Clap once for each syllable.

How many syllables are in **land pollution**? _____



4.d. Categorize types of actions that cause water, air, or land pollution. (DOK 2)

3

How Do We Use Land?

Land is a natural resource.

Land includes soil, rocks, and sand.

People use soil to grow plants.

People use rocks to make buildings.

People use sand to make glass.



Land also includes plants and animals.

People use plants to make and build things.

They also use plants for food.

Some people use animals for food and clothing.



1. How do people use plants?

2. How do some people use animals?

3. What is litter?



Science Test Practice

Circle the correct answer.

4. How can people stop making litter?

- (A) They can throw trash on the ground.
- (B) They can put trash in trashcans.
- (C) They can take care of plants and animals.



4.d. (DOK 2)

Land Pollution

Land pollution is waste that causes harm to land.

Trash that people do not put in trashcans is called litter.

Litter can harm plants and animals.



People can put trash in trashcans.
Then the trash can be put in
landfills.

Trash in a landfill does not pollute
land and water.

You can also make less trash.

Use less of things like paper.

Reuse things instead of throwing
them away.



5. How are landfills helpful?

Directed Inquiry

Flip Chart p. 18

Sort Your Trash

Sort trash items by material and think of
ways to reuse the items.



1.b., 1.d., 4.d.

Summary

People use land in many ways.
Land pollution happens when waste causes harm to land.

List two ways people use land resources.

Classify

What are things that cause air, water, and land pollution?

Air	Water	Land

People can help take care of land.
They can use fewer resources.
They can make less trash.
They can put trash in trashcans.



Classify

What are things that cause air, water, and land pollution?

KWL

What Did You Learn?



Science Test Practice

❶ A factory is putting trash into a river. What kind of pollution does this cause?

- Ⓐ air pollution
- Ⓑ land pollution
- Ⓒ water pollution



4.d. (DOK 2)

- ❷ Why do people need air?
- ❸ How does litter cause harm to land?
- ❹ How can people take care of Earth?

KWL

What Did You Learn?



Science Test Practice

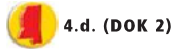
❶ **Circle** the correct answer.

- ❷ People need air to _____.
- ❸ Litter harms _____ and _____.
- ❹ People can take care of Earth by using fewer _____ and by not _____.

Circle the correct answer.

1. What would happen if a lake were polluted?

- (A) Only animals could use the water safely.
- (B) Only plants could use the water safely.
- (C) No living things could use the water safely.



2. A boat spills oil into a lake. What could this cause?

- (A) air pollution
- (B) land pollution
- (C) water pollution

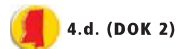


3. Look at the picture.



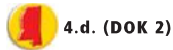
What could smoke from this factory cause?

- (A) air pollution
- (B) land pollution
- (C) water pollution



4. Robert and his father are cleaning trash out of a local river. What kind of pollution are they cleaning up?

- (A) air pollution
- (B) land pollution
- (C) water pollution



5. Which could you use to help stop air pollution?

- (A) bike
- (B) car
- (C) truck

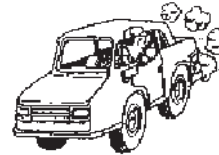


6. Which picture shows someone cleaning up pollution?

(A)



(B)



(C)



KWL

What Do You Know?

Talk with a partner.

Tell about today's weather.

Tell about yesterday's weather.

Weather and Seasons





Contents

- 1 What Is Weather? 182
- 2 How Can You Measure Weather? 186
- 3 What Are Clouds and Rain? 190
- 4 What Is Weather Like in Spring
and Summer? 194
- 5 What Is Weather Like in Fall
and Winter? 198

KWL

What Do You Want to Know?

What else do you wonder about weather?

VOCABULARY


weather What the air outside is like. (*noun*)

VOCABULARY ACTIVITY

Classify Words

weather

Weather is what the air outside is like. What kinds of weather do you know?

 **4.c.** Observe, identify, record, and graph daily weather conditions. (DOK 3)

1

What Is Weather?

Weather is what the air outside is like.

There are many kinds of weather. Weather may be warm or cool. Weather may be sunny or cloudy.

warm and sunny



Weather may be windy.
Weather may be rainy, too.
You can see and feel weather.



windy

rainy



1. Draw an X on the picture of a windy day.
2. Draw a rainy day.



Science Test Practice

Circle the correct answer.

3. Which words describe the weather shown?
(A) sunny and warm
(B) windy and rainy
(C) cloudy and warm



4.c. (DOK 3)

4. Think about the weather where you live. What is your favorite kind of weather where you live?

Directed Inquiry







Flip Chart p. 19

Record Weather

Observe the weather for five days and record observations.



Ways Weather Changes

Monday	cloudy 	
Tuesday	rainy 	
Wednesday	sunny 	

Weather Changes

Weather can change from day to day.

One day may be sunny and warm.

The next day may be cloudy and cool.

Then clouds may bring rain.

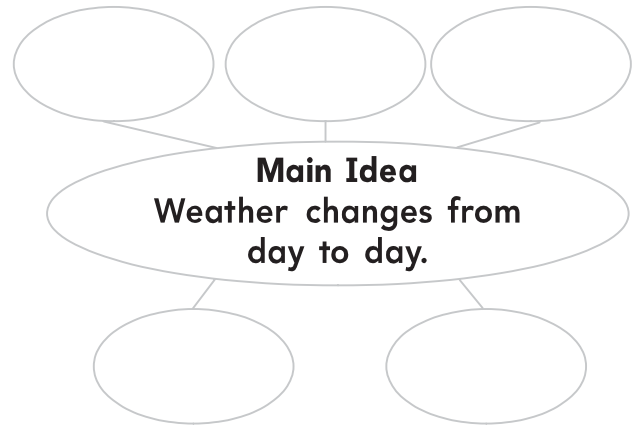


Main Idea

What are some kinds of weather?

Summary Weather is what the air outside is like. Tell about weather you know.

Main Idea What are some kinds of weather?



VOCABULARY

temperature How warm or cool something is. (*noun*)


thermometer A tool that measures temperature. (*noun*)

VOCABULARY ACTIVITY

Use Words

temperature

Circle words on these two pages that tell about temperature.

 **4.c.** Observe, identify, record, and graph daily weather conditions. (DOK 3)

2

How Can You Measure Weather?

You can use tools to tell about weather.

A **thermometer** is a tool that measures temperature.

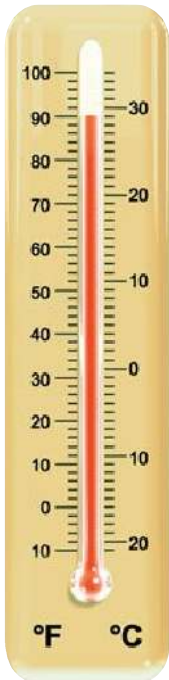
Temperature is how warm or cool something is.



You can tell what to wear by the temperature.

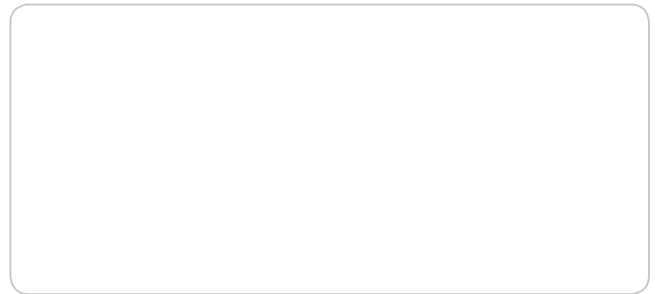
You wear warm clothes when it is cold.

You wear clothes that keep you cool when it is hot.



1. Circle the thermometer that shows that the temperature is hot.

2. Draw clothes that people would wear in warm weather.



Use the Activity Card **Compare Temperatures**.



1.c., 1.e., 4.c.



Science Test Practice

Circle the correct answer.

3. Kaya wants to measure how hard the wind is blowing. Which tool should she use?

- (A) thermometer
- (B) wind vane
- (C) windsock



4.c. (DOK 3)

Directed Inquiry

Flip Chart p. 20

Measure Weather

Use tools to gather data on temperature and rainfall for a week.



1.c., 1.e., 4.c.

Tools for Wind and Rain

You can use tools to measure the wind.

A windsock and a wind vane show which way the wind blows.

A windsock shows how hard the wind blows.

windsock



wind vane

You can use a tool to measure rain. A rain gauge measures how much rain falls.



rain gauge

Draw Conclusions

What can you tell about the wind if a windsock is hanging down?

Summary You can use tools to measure weather. Draw the tools that measure weather.

Three empty rounded rectangular boxes arranged horizontally, intended for drawing weather measurement tools.

Draw Conclusions What can you tell about the wind if a windsock is hanging down?

Fact: A windsock shows how hard the wind is blowing.



Fact: A windsock is hanging down.



Conclusion:

VOCABULARY

cloud Many drops of water together. (*noun*)


water cycle Water moving from Earth to the sky and back again. (*noun*)

VOCABULARY ACTIVITY

Use Pictures

water cycle

Look at the picture. Use your finger to trace the way that water moves back and forth to Earth.

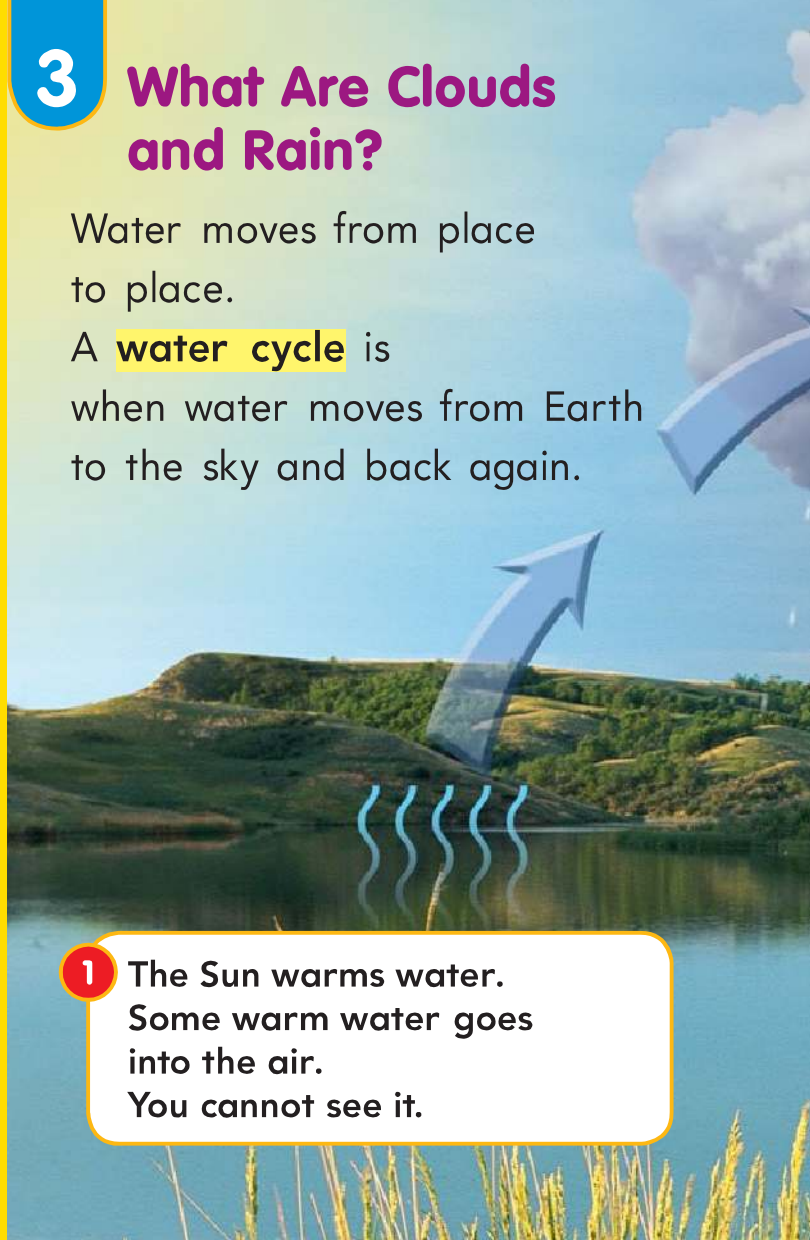
 4.c. Observe, identify, record, and graph daily weather conditions. (DOK 3)

3

What Are Clouds and Rain?

Water moves from place to place.

A **water cycle** is when water moves from Earth to the sky and back again.



- 1** The Sun warms water. Some warm water goes into the air. You cannot see it.

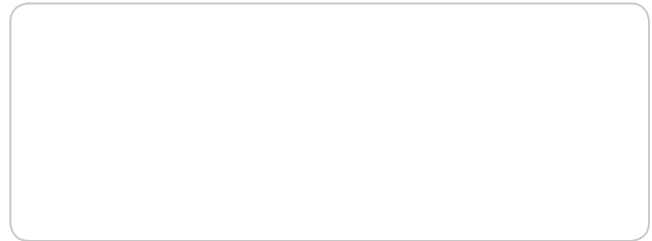


2 Water in the air cools.
Tiny drops of water
make up a cloud.

3 Some drops get bigger.
The drops fall back
to Earth as rain.

1. How does water fall to Earth?

2. Draw the water cycle.



Science Test Practice

Circle the correct answer.

3. What do the arrows in the picture stand for?

- (A) how water moves through the water cycle
- (B) how the Sun warms Earth
- (C) how a cloud forms



4.c. (DOK 3)

4. Point to each cloud and say its name.

Draw each cloud.

Cumulus

Cirrus

Stratus

Kinds of Clouds

A **cloud** is made of drops of water.

Clouds have different shapes.

Clouds have different colors.

Look at clouds to see how weather changes.

These clouds are thin.

It may rain in a day or two.



Some clouds are puffy and white. They can turn gray and bring rain.

Some clouds are low and gray. They may bring rain or snow.



Cause and Effect

What can clouds tell you about changes in the weather?

Summary Water moving from Earth to the sky and back again is called the water cycle.

What happens when tiny drops of water in clouds get bigger?

🎯 **Cause and Effect** What can clouds tell you about changes in the weather?

Cause

Effect

You see gray clouds low in the sky.



VOCABULARY

season A time of year that has its own kind of weather. (*noun*)

spring The season that follows winter. (*noun*)


summer The season that follows spring. (*noun*)

VOCABULARY ACTIVITY

Classify Words

spring

Circle all the words on these pages that tell about spring.

 **4.g.** Distinguish characteristics of each season and describe how each season merges into the next. (DOK 1)

4

What Is Weather Like in Spring and Summer?

A **season** is a time of year. It has its own kind of weather.

Spring

Spring is the season that follows winter. It is warmer in spring. Warmer weather and spring rain help plants grow.



Animals find food
when new plants grow.
Animals that were sleeping
in winter wake up.
Many baby animals are born
in spring.



I Wonder . . . Animals go
through many changes in spring.
I wonder what other changes
happen in spring?

Science Test Practice

Circle the correct answer.

**I. Which of the following
words describe spring?**

- (A) warmest season
- (B) long hours of sunshine
- (C) follows winter

4.g. (DOK 1)

2. Tell about summer.

3. What are some ways you try to stay cool in summer?



Use the Activity Card **Show Summer Weather**.



1.e., 4.g.

Summer

Summer is the season that follows spring. Summer is the warmest season of the year. People try to stay cool. They wear clothing that keeps them cool.



Plants grow in summer.
Young animals grow, too.
Young animals learn to find food.
This lamb eats a growing plant.



Compare and Contrast

How are spring and summer different?

Summary Spring and summer are times of warm weather and new life.

Tell about the weather in these seasons.

Compare and Contrast

How are spring and summer different?

Spring	Summer

What Is Weather Like in Fall and Winter?

VOCABULARY

fall The season that follows summer. (*noun*)


winter The season that follows fall. (*noun*)

VOCABULARY ACTIVITY

Multiple-meaning Words

fall

Look at this page. How is the word **fall** used on this page? What is another way you use the word **fall**?

 **4.g.** Distinguish characteristics of each season and describe how each season merges into the next. (DOK 1)

Fall is the season that follows summer. It is cooler in fall. People wear warmer clothes. Leaves drop from some trees.



Animals get ready
for colder weather.
Some animals grow thick fur.
Other animals move
to places that have more food.
Many animals store food
for winter.



I. What do animals do to get ready
for the cold weather?

I Wonder . . . Some activities
change with seasons. Tell two
activities you do in fall and two
you enjoy in winter.

2. **Circle** words on these two pages that tell about winter.

Winter

Winter is the season that follows fall.

It is the coldest season of the year.

Snow falls in some places.



Sometimes it is hard for animals to find food.

Some plants die.

Many trees lose their leaves.



3. Draw what a tree looks like in cold winter weather.

A large, empty rectangular box with a thin black border, intended for a student to draw a tree in cold winter weather.

Science Test Practice

Circle the correct answer.

4. Which words describe plants in winter?

- (A) Plants grow.
- (B) Plants die.
- (C) Plants sprout.




4.g. (DOK 1)

Summary Fall and winter bring cooler weather and slower growth.

Use your finger to trace arrows pointing to each season. Say each season as you touch the word.

What shape did you trace?

 **Sequence** What season comes before winter?

winter

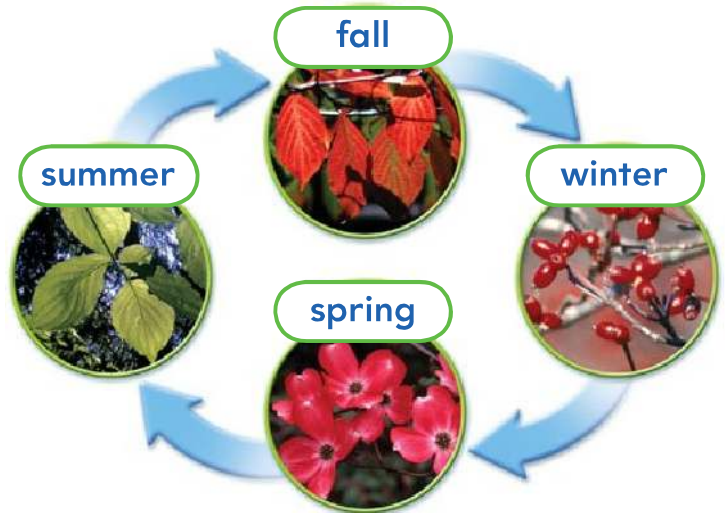
spring

summer

The Pattern of Seasons

The seasons change in the same order every year.

The order is spring, summer, fall, and winter.



Sequence

What season comes before winter?

KWL

What Did You Learn?



Science Test Practice

1 Which of these is a tool that measures temperature?

- (A) rain gauge
- (B) wind vane
- (C) thermometer



4.c. (DOK 3)

- 2 What is a season?
- 3 What can you tell by looking at clouds?
- 4 How do you know it is windy if you cannot see the wind?

KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

2 A season is _____

3 You can _____

4 You know it is windy if _____

Circle the correct answer.

1. Cassie wants to measure the temperature and rainfall. What tools should she use?

- (A) thermometer and windsock
- (B) rain gauge and windsock
- (C) thermometer and rain gauge

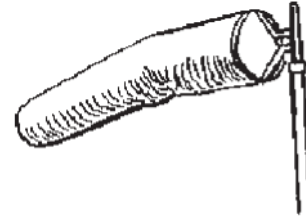
 1.d. (DOK 1), 4.c. (DOK 3)

2. Leaves are changing color and dropping from trees. Which season is it?

- (A) spring
- (B) summer
- (C) fall


 4.g. (DOK 1)

3. Look at the picture of the tool.



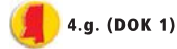
What is it telling you about the weather?

- (A) It is a rainy day.
- (B) It is a windy day.
- (C) It is not a windy day.

 4.c. (DOK 3)

4. How is summer different from fall?

- (A) Summer is cooler than fall.
- (B) Summer is warmer than fall.
- (C) Leaves change color in summer.

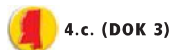


5. David wants to go to the beach on a sunny day.

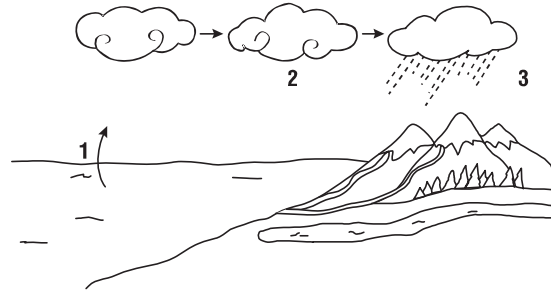
 80° Monday	 60° Tuesday	 55° Wednesday
-------------------	--------------------	----------------------

Which is the best day to go?

- (A) Monday
- (B) Tuesday
- (C) Wednesday



6. Look at this diagram of the water cycle.



How would you label Part 1?

- (A) A cloud forms.
- (B) Rain falls.
- (C) Water goes into the air.



KWL

What Do You Know?

Talk with a partner.

Draw a picture of things you see in the sky.

Tell about your picture.



Changes in the Sky





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KWL

What Do You Want to Know?

What do you wonder about things in the sky?

VOCABULARY

planet A space object that moves around the Sun. (*noun*)

star A space object that makes its own light. (*noun*)

Sun The brightest space object in the day sky. (*noun*)

VOCABULARY ACTIVITY

Use Words

Sun, star, planet

Which of these words do you see on this page? Circle it.

 **4.e.** Collect, categorize, and display various ways energy from the sun is used. (DOK 2)

1

What Can You See in the Sky?

The day sky is light.

You may see clouds.

You may see birds.

You may see the Sun, too.



The **Sun** is the brightest object in the day sky.
The Sun warms the land.
It warms the air.
It warms water.
The Sun keeps people and animals warm, too.



I. List four things that the Sun warms.

I Wonder . . . Living things on Earth need the Sun. What are some of the ways in which people use the Sun?

2. Fill in the blanks.

a. The Sun helps plants _____ and _____.

b. The Sun's light helps _____ and _____ see.



Science Test Practice

Circle the correct answer.

3. Which is an example of how energy from the Sun is used?

- (A) A mother cat feeds her kitten.
- (B) A bear sleeps.
- (C) A seal warms itself on a rock.



4.e. (DOK 2)

Living things on Earth use energy from the Sun.
The Sun helps plants live and grow.
The Sun's light helps people and animals to see.



The Sun makes the sky bright.
You will not see other stars
in the day.



4. Draw a picture of yourself doing something you like to do on a sunny day.

A large, empty rectangular box with rounded corners, intended for drawing a picture of oneself doing something on a sunny day.

5. On these two pages, **circle** the names of things you can see at night.

6. A planet is an _____ that moves around the _____.

The Night Sky

The night sky is dark.

There is no light from the Sun.

You can see the Moon at night.

You can see stars, too.

A **star** is an object that makes its own light.



Sometimes you can see planets.
A **planet** is an object that moves
around the Sun.
Earth is a planet.

Compare and Contrast

How are the day sky and
the night sky different?



Summary

Some things are seen in the day
sky.

Other things are seen in the night
sky.

Circle the words on this page that
tell what a planet is.

Compare and Contrast

How are the day sky and the
night sky different?

Day Sky	Night Sky

VOCABULARY

rotate To spin. Day and night happen when Earth rotates. (*verb*)


VOCABULARY ACTIVITY

Use Words

rotate

Look at the word **rotate** under the heading “Vocabulary.”

What is another word that means **rotate**?

 **4.f.** Identify relationships between lights and shadows and illustrate how the shape of the moon changes over time. (DOK 1)

2

What Causes Day and Night?

This girl is playing outside during the day.
The sky is light.



The sky is dark at night.
The girl needs a light to see
at night.



1. During the day, the sky is

_____.

At night, the sky is _____.

2. Draw a picture of yourself doing
something you do at night.

A large, empty rectangular box with rounded corners, intended for a drawing. The box is white and occupies the lower half of the right page.

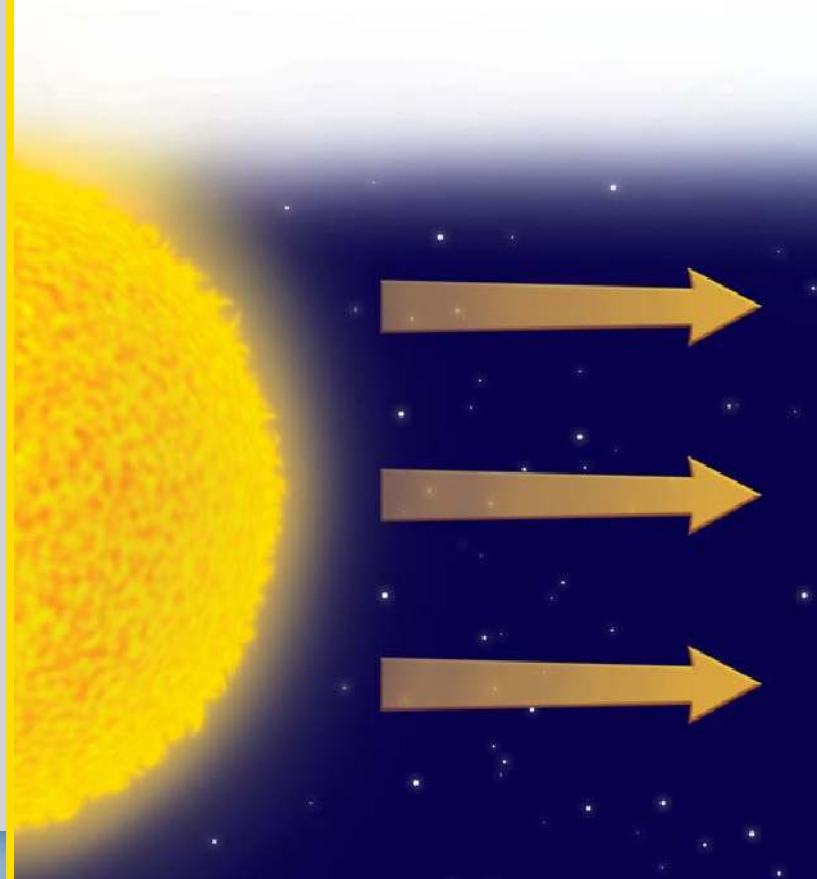
3. What does the word **rotate** mean?

4. What do the arrows on this page stand for?

Day on Earth

Earth **rotates**, or spins.

The Sun shines on different parts of Earth when Earth spins.



It is day when the part of Earth where you live faces the Sun.



5. **Circle** the correct word.

It is (day, night) when the part of Earth where you live does **not** face the Sun.



Science Test Practice

Circle the correct answer.

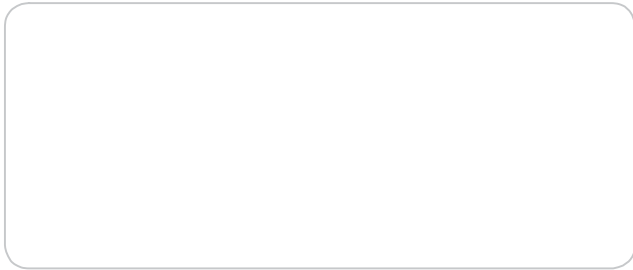
6. Why does the Sun shine on different parts of Earth?

- (A) the Sun rotates
- (B) Earth rotates
- (C) the Sun is close to Earth

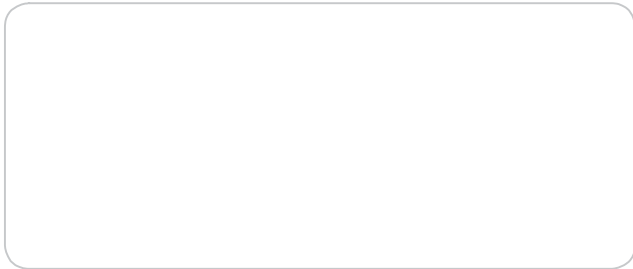


4.f. (DOK 1)

7. Draw a picture of your school.
Show the time when the part
of Earth where you live faces
the Sun.

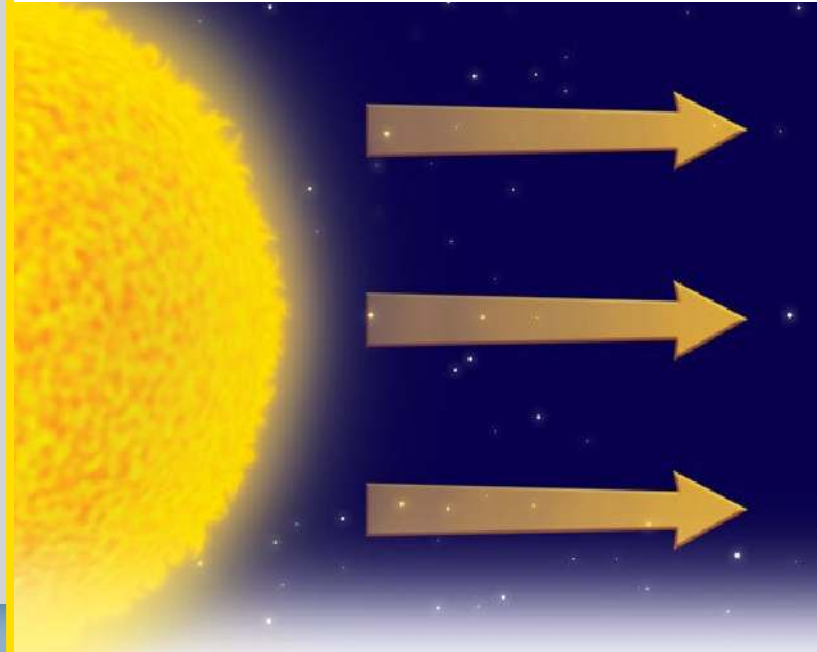


8. Draw a picture of your school
when the part of Earth where you
live faces away from the Sun.



Night on Earth

It is night when the part
of Earth where you live
faces away from the Sun.



It takes 24 hours for Earth to rotate one time.
Earth keeps rotating.
Day and night repeat.

Cause and Effect

Why is the sky dark at night?



Summary

Earth rotates, or spins.
This causes day and night.
When Earth rotates, _____
shines on different parts of Earth.

▶ Cause and Effect

Why is the sky dark at night?

Cause

Effect

The Sun shines
on a place.

The place has
_____.

The Sun does
not shine on
a place.

The place has
_____.

VOCABULARY

Moon A space object close to Earth. (*noun*)

VOCABULARY ACTIVITY

Use Words

Moon

Some words on these two pages describe the Moon.

Circle them.

4.f. Identify relationships between lights and shadows and illustrate how the shape of the moon changes over time. (DOK 1)

3

How Does the Moon Seem to Change?

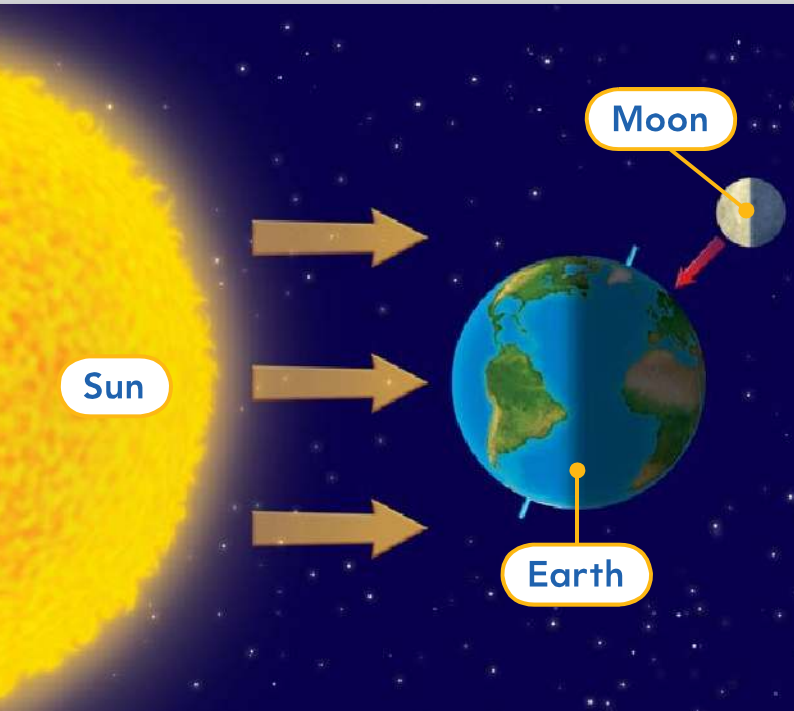
The **Moon** is an object close to Earth.

You can see dark spots on the Moon.

Some of these spots are called craters.



The Sun is a star.
It makes its own light.
The Moon is not a star.
It does not make light.
We see the part of the Moon
that the Sun is shining on.



1. **Circle** the sentences that are **true**.

Draw an **X** on the sentences that are **false**.

The Sun shines on the Moon.

The Moon makes its own light.

The Moon is a star.

The Moon has dark spots.



Use the Activity Card **Compare the Sun and Moon**.



1.b., 1.e.



Science Test Practice

Circle the correct answer.

2. Which picture shows a new moon?



4.f. (DOK 1)

Directed Inquiry

Flip Chart p. 21

Moon Changes

Use models to observe how the Moon seems to change shape.



1.e., 4.f.

The Changing Moon

The Moon is round, but it seems to change.

The Moon's shape looks different every night.



new moon



first quarter moon

The Moon moves around Earth.
It takes 28 days.
We see different parts
of the Moon as it moves.



full moon



last quarter moon

Cause and Effect

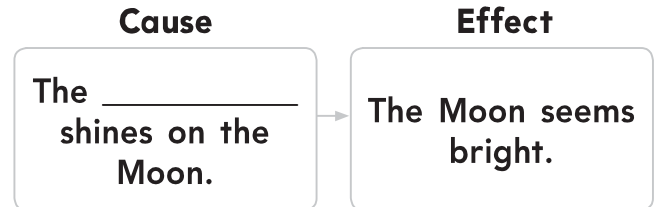
Why does the Moon
seem bright?

Summary

The Moon moves around Earth.
We see different parts as it moves.
It seems to change shape.
Which moon comes after a first
quarter moon?

▶ Cause and Effect

Why does the Moon seem
bright?



VOCABULARY

shadow Something that forms when an object blocks light. (*noun*)

VOCABULARY ACTIVITY

Use Syllables

shadow

Break the word **shadow** into syllables.

Say each syllable aloud.

Clap once for each syllable.

How many syllables are in **shadow**?



2.e. Describe changes in shadows over time and predict how a shadow will look as the light source moves. (DOK 2)

4.f. Identify relationships between lights and shadows and illustrate how the shape of the moon changes over time. (DOK 1)

4

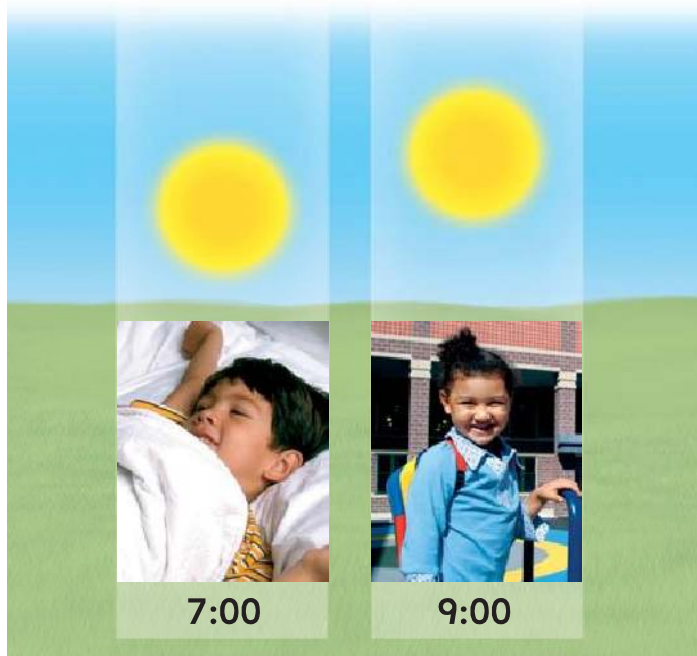
How Does the Sun Seem to Move?

The Sun seems to move from one side of the sky to the other.

The Sun is not moving.

Earth is moving.

Earth is rotating.



7:00

9:00

The Sun is low in the sky in the morning.
It is high in the sky at noon.
It is low in the sky late in the day.



I. When does the Sun seem the highest?

Directed Inquiry

Flip Chart p. 22

Sun Changes

Observe the Sun's location over the course of the day.

1.e., 4.f.



Science Test Practice

Circle the correct answer.

2. Why do shadows change during the day?

- (A) because the Sun is in different parts of the sky
- (B) because the Sun rotates
- (C) because the Sun's shape changes



2.e. (DOK 2), 4.f. (DOK 1)



Use the Activity Card **Observe Shadows**.



1.c., 1.e., 2.e., 4.f.

The Sun and Shadows

A **shadow** forms when an object blocks light. Shadows change during the day.

How Shadows Change



long shadow



short shadow

Shadows change because the Sun is in different parts of the sky.



long shadow

Draw Conclusions

What happens to the Sun in the sky as Earth rotates?

Summary

Shadows form when an object blocks light.

Why do shadows change?

Draw Conclusions

What happens to the Sun in the sky as Earth rotates?

Fact

The Sun is not moving.



Fact

Earth is rotating.



Conclusion

The Sun seems to be in different parts of the _____.

KWL

What Did You Learn?



Science Test Practice

1 Circle the correct answer.

2 I can see the _____, _____, and sometimes _____ in the night sky.

3 The Moon seems to change shape because we see different _____ as it moves around _____.

4 Earth rotates _____ times in one week.

I know because there are seven days and _____ in a week.

KWL

What Did You Learn?



Science Test Practice

1 When is a shadow shortest?

- (A) in the morning
- (B) in the afternoon
- (C) at noon



4.f. (DOK 1)

2 What can you see in the night sky?

3 Why does the Moon seem to change shape?

4 How many times in one week does Earth rotate? How do you know?

Draw a picture to show how a tree makes a shadow on a sunny day.



Circle the correct answer.

1. Matt looks at his shadow at 9:00 A.M. He will look at it again at noon. How will it look at noon?

- (A) It will look longer at noon.
- (B) It will look the same at noon.
- (C) It will look shorter at noon.



2.e. (DOK 2), 4.f. (DOK 1)

2. Which is an example of how energy from the Sun is used?

- (A) A plant grows.
- (B) A boy paddles a boat.
- (C) A man starts his car.



4.e. (DOK 2)

3. Which picture shows a first quarter moon?



4.f. (DOK 1)


4. Look at the picture.



Melissa is observing shadows. On Tuesday, she observes her shadow at noon.


How will her shadow look on Wednesday at noon?

- (A) It will be longer.
- (B) It will be the same.
- (C) It will be shorter.

 1.f. (DOK 2), 2.e. (DOK 2), 4.f. (DOK 1)

5. Which part of the Moon can we see?

- (A) the part that faces Earth
- (B) the part that makes its own light
- (C) the part that the Sun is shining on

 4.f. (DOK 1)

6. Look at the picture.



Which time of day does it show?

- (A) afternoon
- (B) morning
- (C) noon

 2.e. (DOK 2), 4.f. (DOK 1)

Glossary

(A)

adult A full-grown plant, animal, or person. (p. 122)

air pollution Harmful things that get into the air. (p. 166)

amphibian An animal that has wet skin with no hair, feathers, or scales. (p. 120)

attract To pull toward. A magnet attracts iron and steel. (p. 15)

(B)

bones Body parts that hold the body up, help it move, and protect soft body parts. (p. 136)

boulders Very large rocks. (p. 151)

brain Body part that thinks, remembers, senses, and controls all parts of the body. (p. 134)

(C)

cloud Many drops of water together. (p. 192)

condense To change from a gas to a liquid. (p. 36)

cone The part of some trees, such as pine trees, where seeds grow. (p. 106)

(E)

evaporate To change from a liquid to a gas. (p. 35)

(F)

fall The season that follows summer. (p. 198)

Glossary

fins Body parts that help a fish move.

(p. 133)

flower The part of a plant that makes

seeds. (p. 101)

food What living things use to get

energy. (p. 82)

force A push or a pull. (p. 46)

forest A place with many trees that

grow close together. (p. 86)

freeze To change from a liquid to a

solid. A pond may freeze in winter.

(p. 32)

friction A force that makes an object

slow down when it rubs against

another object. (p. 48)

Ⓒ

gas Matter that changes shape to fill all the space it is in. (p. 31)

gills Body parts that help a fish breathe under water. (p. 118)

Ⓓ

heart Body part that pumps blood through the body. (p. 134)

humus Bits of rotting plants and animals in soil. (p. 155)

Ⓔ

intestines Body parts through which food passes after it leaves the stomach. (p. 139)

Glossary

L

larva The stage of some animals, like insects, after the egg stage. (p. 128)

leaf The part of a plant that makes food for the plant. (p. 100)

life cycle The order of changes that happen in the lifetime of a plant or animal. (p. 108)

light Something that lets you see. (p. 56)

liquid Matter that flows and takes the shape of its container. (p. 30)

living thing Something that grows, changes, and makes other living things like itself. (p. 78)

lungs Body parts that take in air. (p. 117)

M

magnet An object that pulls iron and steel toward it. (p. 14)

magnify To make something look larger. (p. 10)

mammal An animal that has hair or fur. A baby mammal drinks milk from its mother. (p. 117)

matter What all things are made of. (p. 4)

melt To change from a solid to a liquid. (p. 33)

Glossary

mineral A nonliving thing found in nature. A rock is made of one or more minerals. (p. 150)

Moon A space object close to Earth. (p. 220)

motion Moving from one place to another. (p. 44)

muscles Body parts that help the body move. (p. 137)

(N)

natural resource Something from Earth that people use. Water is a natural resource. (p. 146)

nonliving thing Something that does not eat, drink, grow, and make other things like itself. (p. 80)

(P)

pitch How high or low a sound is. (p. 66)

planet A space object that moves around the Sun. (p. 213)

position A place or location. (p. 42)

property One part of what an object is like. (p. 4)

pupa The part of a life cycle in which a caterpillar changes into a butterfly. (p. 129)

(R)

repel To push away. Like poles of magnets repel each other. (p. 18)

Glossary

reptile An animal that has dry skin with scales. (p. 119)

root The part of a plant that takes in water from the ground. (p. 99)

rotate To spin. Day and night happen when Earth rotates. (p. 216)

Ⓢ

season A time of year that has its own kind of weather. (p. 194)

seed The part of a plant that has a new plant inside it. (p. 101)

seedling A young plant. (p. 106)

shadow Something that forms when an object blocks light. (pp. 61, 226)

shelter A safe place for animals to live. (p. 86)

skin Body part that covers and protects the body. (p. 135)

soil The loose top layer of Earth. (p. 154)

solid Matter that has its own shape. (p. 28)

sound Something that you can hear. (p. 62)

spines Sharp points on a cactus. (p. 102)

spring The season that follows winter. (p. 194)

Glossary

star A space object that makes its own light. (p. 212)

stem The part of a plant that connects the roots to the other plant parts. (p. 99)

stomach Body part that squeezes food into a thick liquid. (p. 139)

summer The season that follows spring. (p. 196)

Sun The brightest space object in the day sky. (p. 209)

sunlight Energy from the Sun. (p. 83)

Ⓓ

temperature How warm or cool something is. (p. 186)

thermometer A tool that measures temperature. (p. 186)

Ⓥ

vibrate To move back and forth very fast. (p. 62)

volume How loud or soft a sound is. (p. 68)

Ⓦ

water cycle Water moving from Earth to the sky and back again. (p. 190)

water pollution Harmful things that get into water. (p. 170)

weather What the air outside is like. (p. 182)

Glossary

weigh To find out how heavy an object is. (p. 12)

wetland A low area of land that is very wet. (p. 88)

wings Body parts that help animals fly. (p. 132)

winter The season that follows fall. (p. 200)

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