

BIG

SCIENCE 1



STUDENT BOOK



BIG

SCIENCE **1**

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Unit 1

The Nature of Science



What is science?

I will learn

- that scientists ask questions to learn.
- ways scientists observe things.
- ways scientists collect and record data.

1 Circle what you can use to see things.



2 Circle the part of your body you can use to observe the color of a bird.



3 Mark (✓) the birds that look alike.
How do they look alike? Say as a class.



Think!

What is the girl doing?

Lesson 1 • What questions do scientists ask?

- 1** Read. What does a scientist do?
Say as a class.

Science and Scientists

A **scientist** uses **science** to learn about the world around us. A scientist can work with other scientists. They learn new things together. You can use science to learn, too.

- 2** Do scientists work together?
Say with a partner.

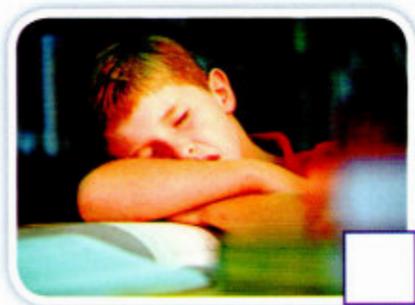
- 3** Read. Mark (✓) the scientists who observe things.

Observe

Scientists observe. **Observe** means to find out about things. You can observe the size, shape, and color of **objects**. You can observe other things, too.

Key Words

- scientist
- science
- observe
- objects
- questions
- answers



- 4 Look at the leaves. What can you say about them?
Say with a partner.



- 5 Read. Match the questions and answers with the pictures.

Questions

Scientists ask many **questions**. They ask questions to find **answers**. You can ask questions. You can find answers, too!

- a) What plant is it?
It's a tree.



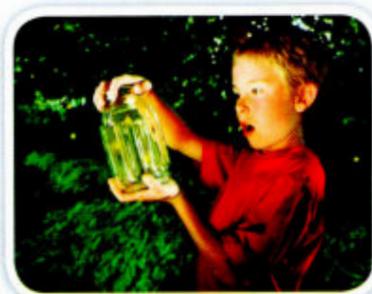
- b) Where is the animal's baby?
In a pouch.



- c) What is the green animal?
It's a frog.



6 Look at the pictures. What are three questions the boy can ask about the animals? Say as a class.

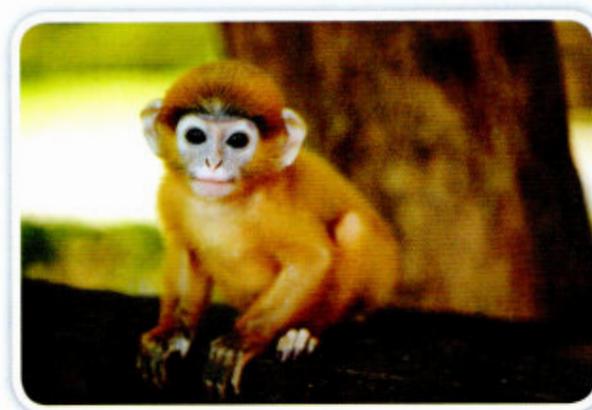


fireflies



firefly

7 Look at the monkey.
Say two questions you
can ask with a partner.



monkey



Think!

Pretend you are a scientist. What animal do you want to study? Why?

Lesson 2 • How do scientists observe?

- 1 Read. Look at the fish. What colors do you see?

Senses

Scientists use their **senses** to observe. You can use your senses, too. You look to observe things like size, shape, and color. You listen to observe sounds.

Key Words

- senses
- tools
- measure
- compare
- group

- 2 Point to the big fish. Point to the small fish. What fish do you like more? Why?



- 3 Look around the classroom. Say three objects you see.

- 4 Circle the things you can hear.



bird



dog



sandwich

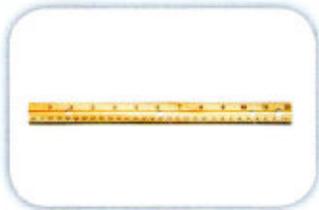


frog

5 Read. Circle the tools.

Tools

Scientists can use **tools** to observe. A hand lens is a tool. It can help you see things. A ruler can help you measure how long an object is. A balance can help you measure how much there is. **Measure** means to tell things like how much, how long, and how tall.



ruler



hand lens



sandwich



balance

6 Say as a class. Match the tools to the questions.

ruler

balance

hand lens

How much
is there?

What can
I see?

How long
is it?



7 Circle *T* (true) or *F* (false).

1. Scientists use tools to observe. T / F

2. You can observe how big or small something is. T / F

3. You only have three senses. T / F

8 Read. Look at the picture.

How are the fish alike?

Say with a partner.



Compare

Scientists say how things are alike. They say how things are different. **Compare** means to say how things are alike and different.

9 Look at the butterflies. Compare.

Say as a class.



10 Read. Circle the things that are alike.

Group

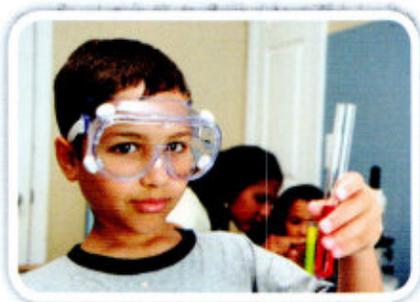
Scientists **group** things, too. You can group objects by how they are alike. You put objects that are alike in a group!



11 Read. Circle the things that help you stay safe.

Safety

You follow rules in science to stay safe. Some tools help you stay safe, too.



safety goggles



hand lens



At-Home Lab

Group Objects

Find five objects at home. Say how they are alike. Say how they are different. Put the things that are alike in a group.

Rules

1. Listen.
2. Wear goggles.
3. Wash your hands.

list of rules

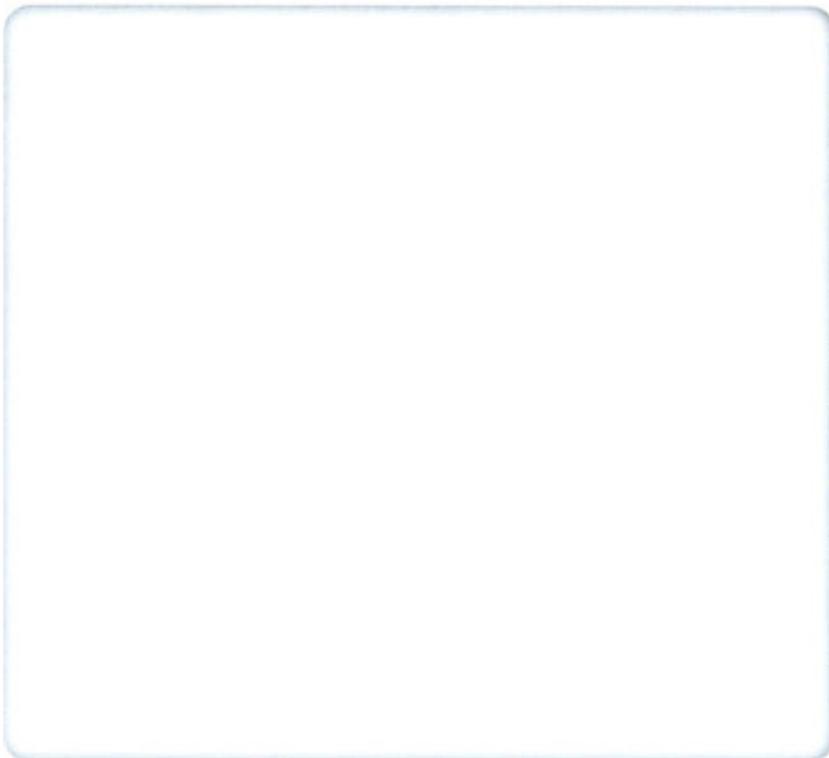
Lesson 3 • How do scientists collect and record data?

- 1 Read. What do scientists use to record data? Say as a class.

Scientists Collect and Record Data

Scientists **collect** information. In science, information is called **data**. Scientists **record** data. They can use words, pictures, numbers, or **charts**.

- 2 Look at the picture. Draw the animal the girl is observing.



Key Words

- collect
- data
- record
- chart



- 3** Read. What can a mark in a chart show?
Say with a partner.

Collect and Record Data

You can collect data by asking questions.
You can record data in a chart. For example,
one mark in a chart can record one person's
answer to a question.



- 4** Ask five friends, "Do you like dogs, cats, or birds best?"
Mark (✓) each answer in the chart.

Favorite Animals						
	cats					
	dogs					
	birds					

- 5** Count the marks for each animal.
Which is your friends' favorite animal?
Compare with other groups.

Materials



viewer

plastic cup
with water



objects

Let's Investigate!

How do things look?

1. Look and draw.
2. Pour.
3. Look and draw.





Lesson 1

What questions do scientists ask?

1 Read and circle *T* (true) or *F* (false).

a) Scientists observe objects.

T / F

b) Scientists do not work together.

T / F

c) Scientists ask questions.

T / F



Lesson 2

How do scientists observe?

2 Read and trace.

a) Scientists use their senses.

b) Scientists use tools to observe.

c) Scientists compare things.

Lesson 3

How do scientists collect and record data?

3 Read and match.

Scientists collect

charts.

They can record data in

data.



Unit 2

Solve Problems

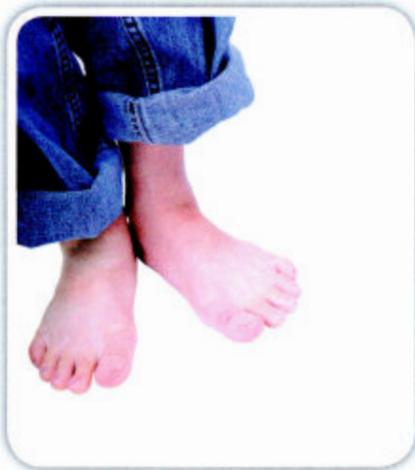


How can you solve problems?

I will learn

- about problems and solutions.
- how an idea becomes a solution.
- how to test and share solutions.

- 1** What is wrong? What is the problem? Say with a partner.



- 2** What does the child need? Say with a partner.
- 3** Why is the girl giving her pen to her classmate? Say as a class.



Think!

Why is the boy wearing eyeglasses?

Lesson 1 • What are problems and solutions?

1 Read. Underline what a problem is.

Problems

You can spill when you drink from a glass or cup. This is a problem. A **problem** means there is something wrong. You need to find a way to fix it, or **solve** it.

2 Read. Underline what a solution is.

Solutions

A **solution** is an answer to a problem. What can solve the problem with the juice? A straw can solve the problem. A straw can be the solution.

3 What is the solution to the child's problem? Say with a partner.

Key Words

- problem
- solve
- solution



- 4 Look at the pictures of problems. What are the problems? Say as a class.



mud



lots of books



rain

- 5 Look at the pictures of solutions. Match the solutions to the problems.



backpack



boots



umbrella

- 6 What do you think of the solutions? Talk as a class.



Flash Lab

A Solution at School

As a class, talk about a problem at school. Talk about a solution.

- 7** Look at the picture. Is it a problem or a solution?
Say as a class.



- 8** Look at the picture. Underline the boy's problem.
- a) The boy can't find the ruler.
 - b) The boy can't find the green colored pencil.
 - c) The boy can't find the notebook.



- 9** What is the solution?
Say as a class.



At-Home Lab

Problems and Solutions

Look at home for a problem and solution.

Say the problem. Say the solution.

Tell your family.



Lesson 2 • How do ideas become solutions?

- 1 Read. Say with a partner what a plan is.

Make a Plan

You think about a problem. Then you have an **idea** about how to solve it. At first the idea is only in your head. You need to make a plan for your solution. A **plan** tells how you make something.

- 2 Look at the picture on page 19. Say the boy's problem again.
- 3 What does the boy do next? Circle.

Key Words

- idea
- plan
- design
- choose
- materials



get a sandwich

draw a notebook

make a plan

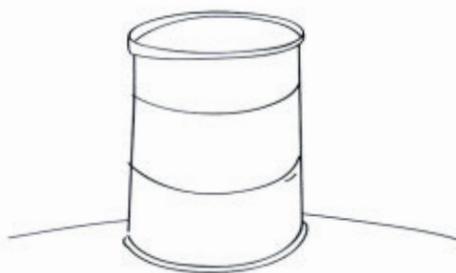
4 Read. Say how you can show your plan.

Draw

You can draw to show your plan. You make a **design**. Your design shows how to make your solution.

5 Look at the picture. What does the boy draw?
Circle.

- a) a pencil
- b) a pencil holder
- c) a straw



6 Draw your own design for a pencil holder.

7 Read and look. Trace.

Choose Tools

Next you **choose** the tools you need to make your design.



You can use it to write and draw.

pencil



You can use them to cut things.

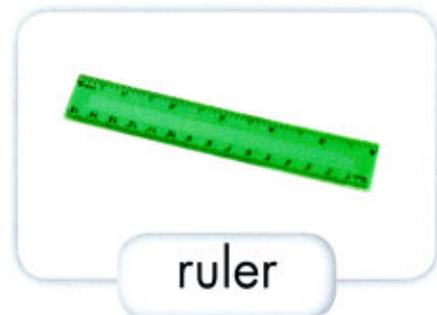
scissors



They hold paper together.

paper clips

8 Say the tools with a partner. What can they help you do?



9 Read. What are materials? Say with a partner.

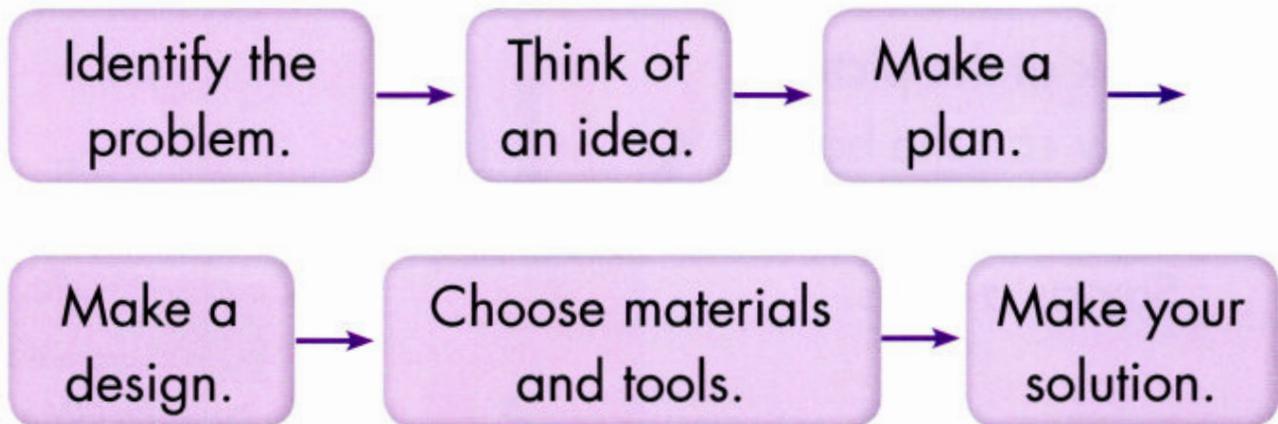
Choose Materials

Materials are the things you put together to make your solution. Now you need to choose materials.

10 Look at the pictures. Circle the materials the boy chooses to make the pencil holder on page 24.



11 Read and say.



Lesson 3 • How can you test and share solutions?

- 1 Read. What can the boy do next?
Say as a class.

Test Your Solution

Scientists test ideas. They see if their idea is right. You can **test** your solution. Does your solution solve the problem? If not, you can **change** it. You can change the design or the materials.

- 2 How can you test an umbrella? Say with a partner.



- 3 Look at the picture.
How can the boy test his solution?
Say as a class.



Key Words

- test
- change
- share
- use

Think!

Does the boy's solution work?
How do you know?

- 4** Read. Look at the pictures. Who shares their solution? Mark (✓).

Share

Scientists **share** their answers. You can share your solutions. You can write, talk, draw, and show pictures. Then other people can **use** your solutions. They use your solutions to solve problems!



- 5** Trace some ways you can share.

show

tell

draw

- 6** Read the sentences. Cover your book. Say the sentences with a partner.

1. You think of an idea.
2. You make a plan and draw your solution.
3. You choose materials and tools.
4. You test your solution to see if it works.
5. You share your solution with others.



Materials



book



string



craft stick



books

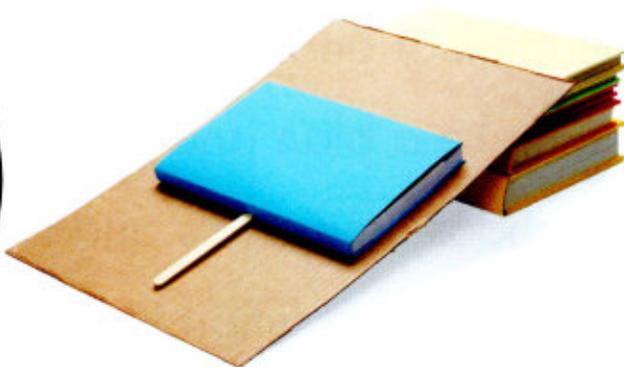
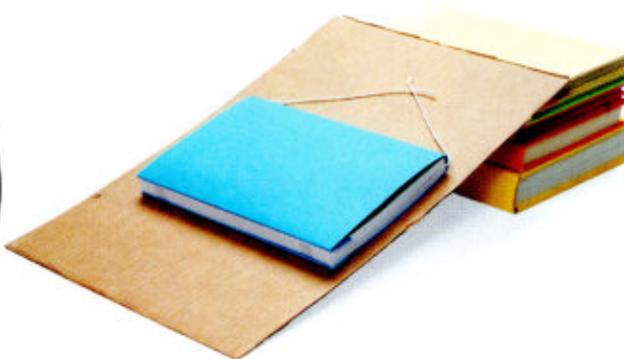


cardboard

Let's Investigate!

How can you lift heavy things?

1. Tie.
2. Put.
3. Pull.
4. Put.
5. Push.





How can you solve problems?

Lesson 1

What are problems and solutions?

1 Circle the picture that shows a problem.



Lesson 2

How do ideas become solutions?

2 Circle *T* (true) or *F* (false).

- | | |
|--|-------|
| a) A design shows how to make your solution. | T / F |
| b) You cannot use tools to make your solution. | T / F |
| c) You can choose materials for your solution. | T / F |

Lesson 3

How can you test and share solutions?

3 Who is not sharing their solution? Mark (✓).



Unit 3

Living and Nonliving Things



What can you say about living things?

I will learn

- about living and nonliving things.
- what living things need.
- how animals are alike and different.
- how plants are alike and different.

1 Circle the thing that can move on its own.



2 How are the animals alike? Say with a partner.



3 How are the plants alike and different? Say as a class.



Think!

Is the teddy bear a living thing?

Lesson 1 • What are living and nonliving things?

Key Words

- living
- grow
- need
- nonliving
- move

- 1 Read. Circle three living things in the picture.

Living Things

Living things **grow**. They get bigger. Living things change. Plants and animals are living things. You are a living thing, too.



- 2 Read again. Underline two living things with a partner.

- 3 Look around the classroom. Point to some living things.



- 4 Look at the pictures. Which is the baby? Which is the parent? Does the baby lion grow? Say with a partner.



5 With a partner, say two things living things need.

What Living Things Need

All living things have **needs**.

Living things need air.

Living things need space.

Living things need water and food.

You are a living thing.

What do you need?



6 Look at the picture of the dog. Draw one thing the dog needs.



Think!

What is another thing you need?

- 7 Read. Look at the pictures.
Circle the nonliving things.

Nonliving Things

Nonliving things do not grow.
Nonliving things do not change.
Nonliving things cannot **move** on their own. A car is a nonliving thing. A toy is a nonliving thing.



- 8 Look around the classroom. Point to three nonliving things with a partner.
- 9 Does a teddy bear grow? Read and trace.

No. A teddy bear is nonliving.



Flash Lab

Living and Nonliving Things

Go outside with the class. Point to and say three living things. Point to and say three nonliving things.



Lesson 2 • How are animals alike and different?

1 Read. Underline one way cats and dogs are alike.

Key Words

- fur
- body coverings
- feathers
- paws
- fins
- wings
- beaks

Compare Animals

Animals can be alike. Cats and dogs both have **fur**. Animals can be different. Cats and dogs make different sounds. Animals can have different colors and shapes. They can have different **body coverings**. Birds don't have fur. They have **feathers**.

2 Look at the pictures. Say one way the animals are alike with a partner.

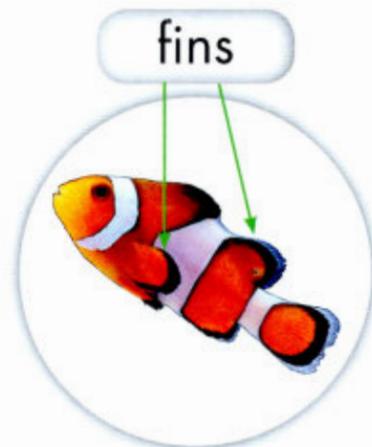


3 Look at the pictures again. With a partner, say two ways the animals are different.

4 Read. With a partner, say a body part fish have.

Animal Body Parts

Some animals have the same body parts. Dogs and cats have **paws**. Some animals have different body parts. Fish and birds don't have paws. Fish have **fins**. Birds have **wings**. They also have **beaks**.



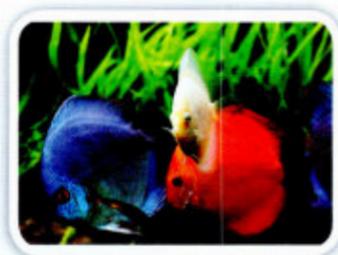
5 Look at the pictures. What animal has two legs? Circle.



6 Read. Underline three ways that some animals can move.

How Animals Move

Animals move in different ways. Some animals swim. Fish swim. Some animals fly. Bees fly. Some animals jump. Frogs jump.



- 7** Read. With the class, say two animals that can fly.

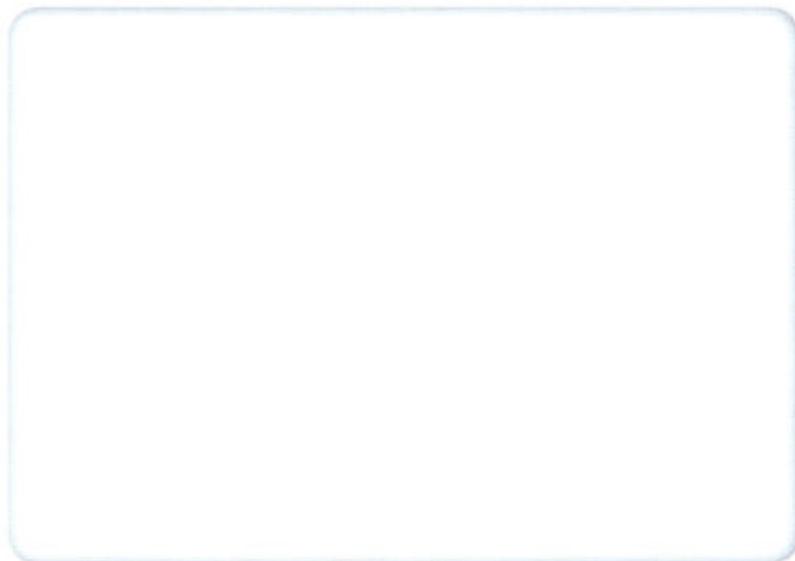
Group Animals

You can put animals that are alike in a group.
Animals that have fur can be in a group.
Animals that fly can be in a group.

- 8** Look at the pictures. Make a group of animals. Circle the animals that are alike.



- 9** Draw one animal that can swim. Share your drawing with the class.



At-Home Lab

Compare Animals

Find pictures of two animals. Say how they are alike. Say how they are different. Tell your family.

Lesson 3 • How are plants alike and different?

1 Read. What are three ways plants can be alike? Say as a class.

Compare Plants

Plants can be alike. Most plants have **stems**, **leaves**, and **roots**. Some plants have **flowers**. Some plants make **seeds**. Plants can be different shapes, sizes, and colors.

2 Look at the plants. With a partner, say how they are alike.

3 Compare the trees. Trace.

a) They are green.

b) They have different

shapes.

Key Words

- stems
- leaves
- roots
- flowers
- seeds
- petals
- trunks



- 4 Look at the pictures. How are the flowers different? Say as a class.

Petals

Tulips and daisies are alike. They have stems and leaves. They make flowers. But they are different, too. Tulip flowers have wide **petals**. Daisy flowers have thin petals.



- 5 Read. What plant needs a lot of water? Mark (✓).

Compare Needs

All plants need water. Some plants need a lot of water. Water lilies need a lot of water. Some plants don't need a lot of water. Cactuses don't need a lot of water.



water lily



cactus



Think!

What are other different things about the cactus and the water lily?

- 6** Read. Can trees be in a group?
Talk as a class.

Group Plants

You can put plants that are alike in a group. Plants that have flowers can be in a group. Daffodils have flowers. Plants that have **trunks** can be in a group. Trees have trunks.



trunk

- 7** Look at the pictures. Circle the plants that can be in a group. Say why with a partner.



pine tree



oak tree



daffodils



Think!

Some plants need a lot of water. Can they be in a group?

Materials

*sheets of
white paper*



pencil

Let's Investigate!

How are animals and plants different?

1. Look at the animals.
2. Compare them.
3. Look at the plants.
4. Compare them.



dog



bird



tree



daisy





What can you say about living things?

Lesson 1

What are living and nonliving things?

- 1 Is the girl a living thing? Say. Match the girl to the things she needs.



Lesson 2

How are animals alike and different?

- 2 How are the animals alike? Circle.
- a) They have fur.
 - b) They have wings.
 - c) They can fly.



Lesson 3

How are plants alike and different?

- 3 Answer *T* (true) or *F* (false).
- a) Plants that have trunks cannot be in a group.
 - b) All plants are the same.
 - c) Plants that have flowers can be in a group.



T / F

T / F

T / F

Unit 4

Plants and Animals



How do living things change as they grow?

I will learn

- that living things grow and change.
- how some animals grow and change.
- how some plants grow and change.

1 Circle the baby animal that looks like its parent.



2 What will the baby plant grow into? Match with a partner.



Think!
 How are you like your parents? How are you different from your parents?

Lesson 1 • Do all young animals look like their parents?

1 Read. Match the babies with their parents.

Animals Grow and Change

Some baby animals **look like** their **parents**. A kitten looks like its parents. It has four legs, a tail, and fur like its parents. Some animals change a lot as they grow. They do not look like their parents. A young **butterfly** is called a **caterpillar**. But a caterpillar does not look like its parents.

Key Words

- look like
- parents
- butterfly
- caterpillar
- hatch



calf



butterfly



caterpillar



cow

2 How is the calf like the cow? Say with a partner.

- 3** Look at the ducks. How are the young ducks like their parent? How are they different?



- 4** Read. What are some ways people grow and change? Talk in small groups.

People Grow and Change

People are animals. People grow and change, too! They grow taller. They learn how to do new things, too.



- 5** Look at the picture. How does the boy change as he grows?



At-Home Lab

Grow and Change

Find pictures of yourself as a baby, young child, and now. Put them in order. Say how you change.

6 Read. Underline some animals that come from eggs.

Some Animals Hatch from Eggs

Many animals start as eggs.

Fish start as eggs.

Chickens start as eggs, too.

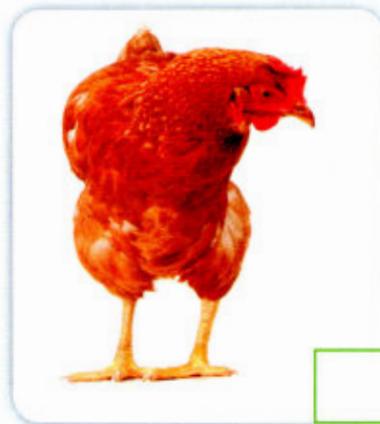
Chicks **hatch** from eggs.

Then they grow into chickens.



You can see the chick's feet and feathers.

7 Look at the pictures. What happens next?
Number with a partner.



8 Compare. How is the chick like its parent?
How is it different? Talk in small groups.

9 Do all chicken eggs grow into chickens?
Talk with a partner.

Lesson 2 • How do some animals grow and change?

1 Read, look, and mark (✓) the adult animal.

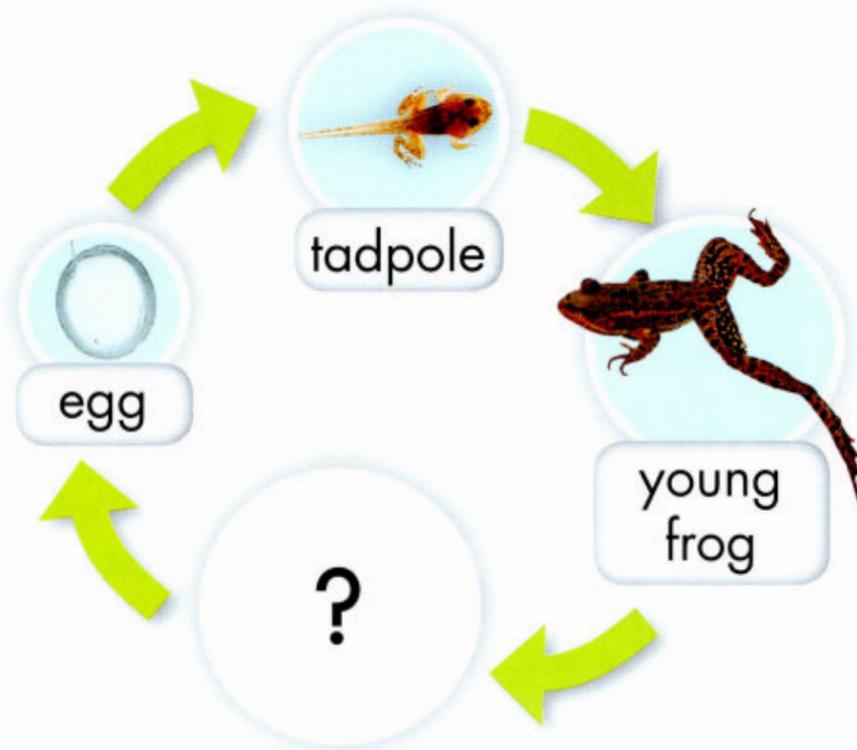
Life Cycles

Animals grow and change from young animals to **adults**. Then the adults can have babies or **lay eggs**. This is called a **life cycle**.

A **frog** starts as an egg. Then a **tadpole** hatches from the egg. Next, it grows into a young frog. Then it changes into an adult frog. An adult frog can lay eggs and be a parent. The life cycle starts again.

Key Words

- adult
- lay eggs
- life cycle
- frog
- tadpole
- chrysalis



worm

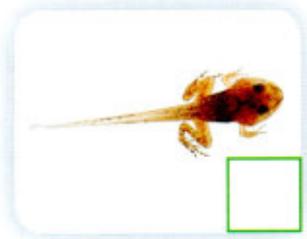
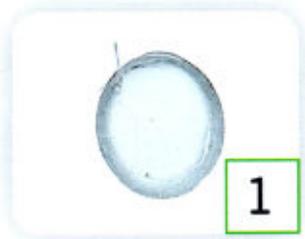
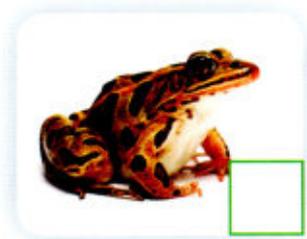
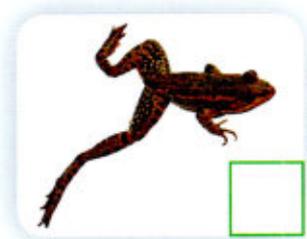


frog



fish

- 2** Look at the pictures. What happens next?
Number with a partner.



- 3** Read. How does a butterfly grow and change?
Talk in small groups.

The Life Cycle of a Butterfly

A butterfly starts as an egg. A caterpillar hatches from the egg. The caterpillar gets bigger. It changes into a **chrysalis**. A chrysalis changes into a butterfly. An adult butterfly can lay eggs. The cycle starts again.

- 4** Read and trace. Say with a partner.

A butterfly starts as an egg.

It changes into a caterpillar.

Then it changes into a chrysalis.

Finally, it grows into an adult butterfly!

- 5** Does a butterfly grow and change like a frog does?
Talk as a class.

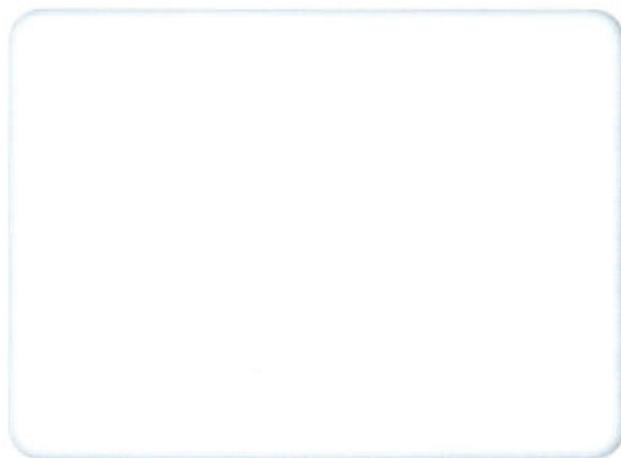
6 Circle *T* (true) or *F* (false). Check with a partner.

a) Animals don't change. **T / F**

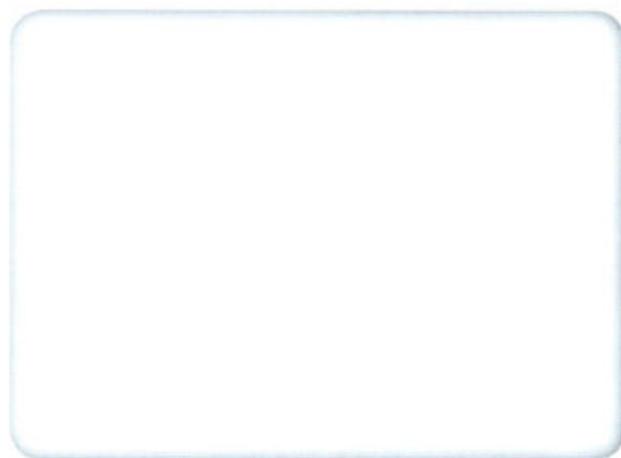
b) A young frog is called a tadpole. **T / F**

c) An adult animal can have babies
or lay eggs. **T / F**

7 Draw a tadpole and an adult frog. How are they different? Show and tell with a partner.



tadpole



adult frog

8 What are two animals that come from eggs?
Say as a class.

9 How does a puppy grow and change?
Say as a class.



At-Home Lab

Grow and Change
Tell your family how a butterfly or frog changes as it grows.

Lesson 3 • How do some plants grow and change?

- 1 Read. What are four parts of a sunflower plant? Underline.

The Life Cycle of a Plant

Plants grow and change, too. Most plants grow from a seed. A sunflower starts life as a seed. The seed has food for the young plant. The young plant is called a **seedling**. The sunflower grows roots, a stem, and leaves. It gets taller. It grows into an adult sunflower plant. The plant makes flowers. And the flowers make seeds. The life cycle can start again.

- 2 How does a sunflower seed grow into a sunflower plant? Talk with a partner.
- 3 Does a daisy plant grow like a sunflower? Talk with a partner.

Key Words

- seedling
- fruit



sunflower seeds

Think!

Do all plants
have flowers?



- 4 Read. Look at the pictures. Draw arrows to show the life cycle of the apple tree.

The Life Cycle of an Apple Tree

An apple tree starts as a seed. Then it changes into a seedling. Then it grows into an adult apple tree. An adult apple tree grows flowers. Some of the flowers make **fruit** with seeds. The apple seeds can grow into apple seedlings.



apple seeds

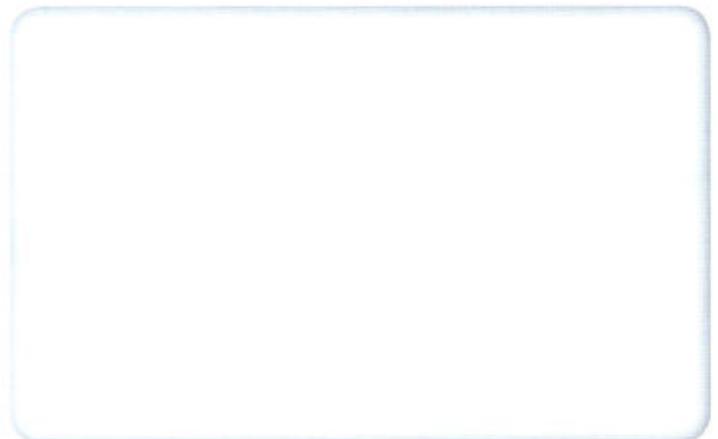


seedling



adult apple tree

- 5 Draw a fruit you know. Does it have seeds? What do the seeds look like?



- 6** Read. Draw a bean, a bean seedling, and an adult bean plant. Show and tell.

Bean Plants

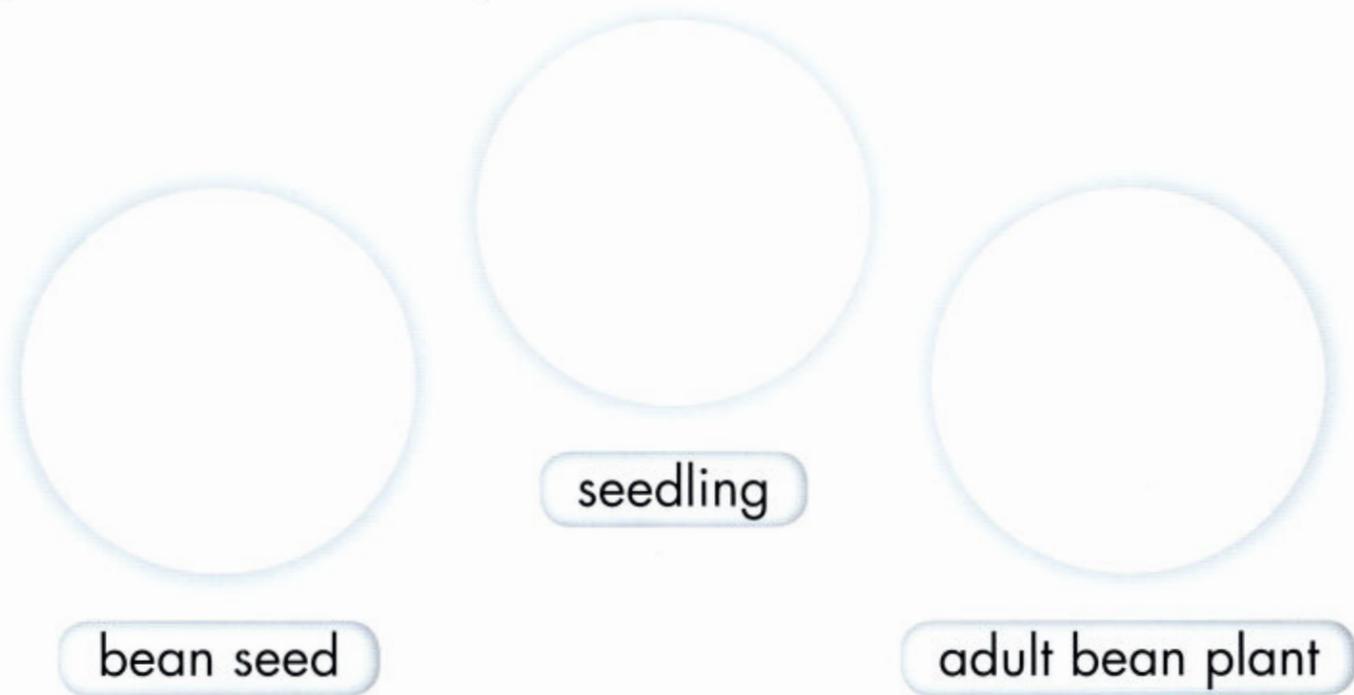
A bean plant starts as a seed.
A bean grows into a seedling.
Then it grows into a bean plant.
An adult bean plant has seeds. The bean seeds can grow into new bean plants.



At-Home Lab

Does it have seeds?

Get your favorite fruit.
Ask an adult to cut it in half. Does it have seeds?
Draw what you find.



- 7** Think of a plant or animal. Draw it as a young plant or animal. Draw it as an adult. Show and tell. How does the plant or animal change?



Materials

sheets of
white paper



caterpillars



butterfly
home



crayons



Let's Investigate!

How does a butterfly change?

1. Look and draw the caterpillars.
2. Wait and look.
Draw the chrysalises.
3. Wait and look.
Draw the butterflies.





How do living things change as they grow?

Lesson 1

Do all young animals look like their parents?

1 Circle *T* (true) or *F* (false).

- a) A calf looks a lot like an adult cow. **T / F**
- b) A caterpillar looks like an adult butterfly. **T / F**
- c) Animals don't change as they grow. **T / F**

Lesson 2

How do some animals grow and change?

2 How does a frog grow and change? Trace.

- a) A frog starts as an egg.
- b) A tadpole hatches from the egg.
- c) Then it grows into a frog.

Lesson 3

How do some plants grow and change?

3 Match and number 1–4.

1 seedling

2 fruit



3 flowers

4 seeds



Unit 5

Body and Senses



What am I like?

I will learn

- about the five senses.
- what my body needs.

- 1 Look at the picture.
What do you see?
Say with a partner.



- 2 Look at the pictures. What body parts can tell you about the soup? Talk in pairs.



- 3 What does your body need? Say as a class.



Think!

Can we hear everything
dogs hear?

Lesson 1 • What are my senses?

Key Words

- see
- hear
- touch
- taste
- smell
- feel
- skin
- tongue

- 1** Read. Look at the pictures.
Label the pictures with a partner.

The Five Senses

Scientists use their senses to observe the world. You can use your senses to observe the world, too. You **see** things with your eyes. You **hear** things with your ears. You **touch** things with your hands. You **taste** things with your tongue. You **smell** things with your nose.



- 2** Look at the pictures. Match the words to the sentences.

I can see things with my _____.

ears

I can hear things with my _____.

nose

I can touch things with my _____.

hands

I can taste things with my _____.

eyes

I can smell things with my _____.

tongue

- 3** Read. What kinds of things can you see? Talk in small groups. Underline.



The girl's umbrella has white circles!

See

You can see colors, sizes, and shapes.
You can see what color something is.
You can see how big or small something is. You can tell if something is a circle or a square.

- 4** Look at the picture.
What colors can you see?
Say with a partner.



- 5** What animal is big?
What animal is small?
Point and say with a partner.



- 6** Look at the picture.
What things can you see? Say as a class.



- 7** Read. What are two things you can hear? Talk with a partner.

Hear

You can hear a dog bark or a bird sing. You can hear loud sounds and soft sounds. A dog can make a loud sound. A bee can make a soft sound.

- 8** What makes a loud sound? What makes a soft sound? Point.



- 9** Look at the pictures. What animals can you hear? Say as a class.



cow



worm



bee

Flash Lab

Things You Can See and Hear

Walk around the classroom. Say four things you can see. Say two things you can hear.

10 Read. Does your desk feel smooth or rough?

Touch and Feel

You can use your hands to touch things. You **feel** things with your **skin**. You can feel when something is rough or smooth.

Some rocks are rough.
Some rocks are smooth.
You can feel what is hot and what is cold.
Be careful. Don't touch anything hot!



hot



rough

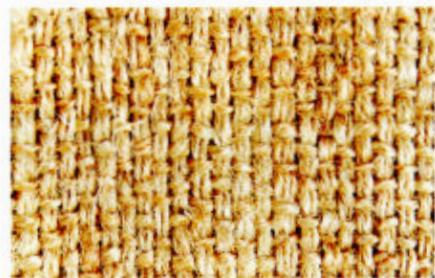


cold



smooth

11 Look at the pictures. What feels soft? Circle.

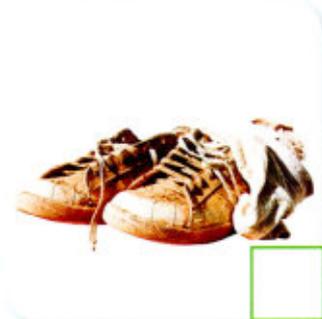


12 Look at the pictures again. What feels rough?
Talk with a partner.

- 13** Read. What smells good? Mark (✓).
What smells bad? Mark (✗).

Smell

You use your nose to smell. Many flowers smell good.
Sometimes garbage smells bad.



- 14** What smells good? Talk in small groups. Circle.



perfume



sun



food

- 15** What are some things you can hear, see, and touch?
Talk with a partner.



rabbit



bell



pony

- 16** Read. Look at the pictures. What tastes sweet? What tastes salty? Say with a partner.

Taste

You taste things with your **tongue**. You can taste sweet things like ice cream. You can taste salty things like potato chips. You can taste sour things, too. Limes taste sour.



- 17** Look at the pictures again. Circle what you can taste and smell.
- 18** Look at the pictures. What things can you see or hear? What things can you smell or taste? What things can you feel? Talk as a class.



Think!

What sense do you use a lot?

Lesson 2 • What does my body need?

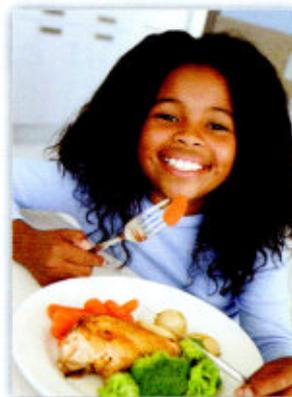
- 1 Read. Say three things you need with a partner.

Living things have needs. You are a living thing. You need food, exercise, water, sleep, and shelter.

- 2 Read. What does food give you? Underline.

Food

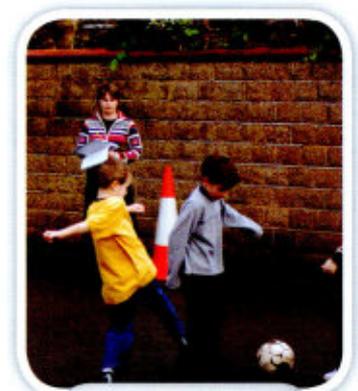
You need food to stay **healthy**. Food gives you **energy**. Energy helps you grow. It helps you do things like run and play and think in school.



- 3 Why do you need food? Talk in small groups.

Key Words

- healthy
- energy
- exercise
- sleep
- shelter



exercise

Think!

Do you need to eat candy?

- 4** Read. How does exercise help your body?
Say with a partner.

Exercise

You need exercise to stay healthy.

Exercise keeps your bones and muscles healthy and strong.

- 5** What are some ways you can exercise?
Talk in small groups. Show.



- 6** Read. Look at the picture. Is the boy doing something to keep his body healthy?

Water

You need water, too. About half of your body is made of water! You lose water when you run and play or when it's hot outside. Then you need to drink more water.



- 7** Read. Look at the pictures. Circle the pictures of what your body needs to stay healthy.

Sleep

You also need sleep to stay healthy. **Sleep** helps you remember what you learn during the day. You even grow when you sleep!



- 8** Read. How does shelter help you?
Say with a partner.

Shelter

Many living things need shelter. **Shelter** keeps them safe and warm. You need shelter, too. Your house is a shelter. It keeps you safe and warm!



Prairie dogs use holes for shelter.



Your house is a shelter.

Materials

paper clip

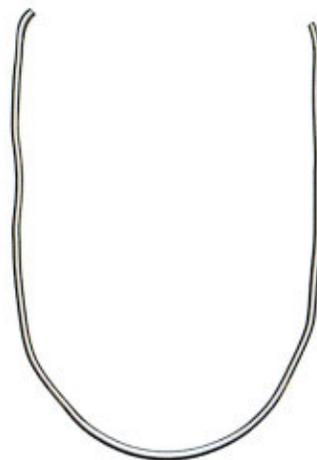


blindfold

Let's Investigate!

How many points can you feel?

1. Unbend.
2. Make a letter U.
3. Blindfold.
4. Press.
5. Ask and say.





Lesson 1

What are the five senses?

1 Look at the pictures. Mark (✓) for each thing.

	see	hear	touch	smell	taste
					
					
					

Lesson 2

What does my body need?

2 What are some things you need? Write.

water

sleep

exercise

a) You need to do  _____, like play outside, to stay healthy.

b) You need to drink a lot of  _____.

c) Your body needs  _____ at night to grow.

Unit 6

Earth and Sky



What are Earth and the sky like?

I will learn

- about kinds of land and water on Earth.
- what I can see in the day and night skies.
- about weather and seasons.

- 1 What picture shows water?
What picture shows land?
Say with a partner.



- 2 Look at the pictures. Mark (✓) what you can see in the sky.



sun



flowers



trees



rainbow

- 3 Is it hot outside?
Talk as a class.



Think!

Look at the picture. Is it day or night?

Lesson 1 • What makes up Earth?

1 Read. Is there water close to where you live? Say with a partner.

Kinds of Water

Earth is where we live. Earth is made up of water and **land**. Water covers most of Earth. Water is in **oceans**, **lakes**, **rivers**, and **swamps**.

Key Words

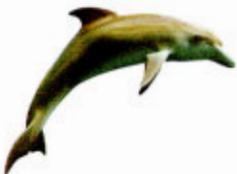
- Earth
- land
- oceans
- lakes
- rivers
- swamps

2 Look at the pictures. Trace.



ocean lake river swamp

3 Which animals live in water?
Say as a class.



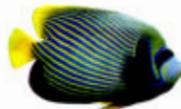
dolphin



deer



squirrel



fish



Think!

How do you know what
is the water and
what is the land?

- 4** Read. What are mountains?
Say with a partner. Circle.

Kinds of Land

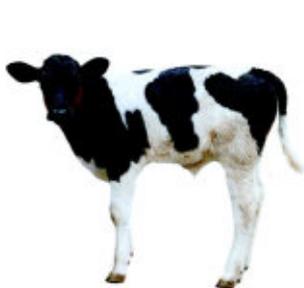
There are many kinds of land on Earth. Hills are land that is high. Mountains are land that is very high. Valleys are land that is low. They have hills or mountains around them.



- 5** What are two kinds of land? Trace.

mountain valley

- 6** What are some animals that live on land? Say as a class.



Think!

Can some animals live on land and in water?

Lesson 2 • What can you see in the day and night skies?

1 Read. Where is the sky?

The Sky

We see the **sky** when we look up outside. You can see different things in the sky at different times.

2 Look at the pictures. Trace.

The Day Sky

The sky is light in the day. The sun gives Earth light. You can see the **sun** in the sky in the day. Sometimes you can see **clouds**. Sometimes you can see the **moon**, too!



sun



clouds



moon

- 3 What does the sun give Earth? Say with a partner.
- 4 What can you see in the day sky? Say with a partner.



Think!

What else can you see in the day sky?

5 Read. Label the pictures with a partner.

The Sun in the Sky

The sun comes up each day. The sun is low in the sky in the morning. The sun moves across the sky each day. The sun is high in the sky at noon. The sun is low in the sky in the evening. The sun goes down at night. Then the sky is dark.

morning noon night



6 How are morning and evening alike?
Talk as a class.

7 How do you know it is noon?
Talk with a partner.

- 8** Read and underline what stars are.

The Night Sky

The sky is dark at night. You cannot see the sun. Sometimes you can see the moon in the night sky. Sometimes you can see **stars**. Stars are like suns that are very far away from Earth. Sometimes you can see clouds, too!

- 9** Look at the pictures. Mark (✓) the picture of the stars.



- 10** Draw the day sky and the night sky.
Share with the class.

Day Sky

Night Sky

Lesson 3 • What is the weather? What are the seasons?

1 Read. Say what weather is with a partner.

Weather

Weather is what it is like outside.

The weather can change every day.

It is **sunny** when there is a lot of sun.

It is **cloudy** when there are clouds in the sky.

It can be **clear**.

That means there are no clouds in the sky.

Sometimes it is **rainy**.

Sometimes it is **windy**.

Sometimes it is **snowy**.

Key Words

- weather
- sunny
- cloudy
- clear
- rainy
- windy
- snowy
- seasons



2 What does clear mean?
Say with a partner.

3 Look at the pictures. Match with the words.



clear

sunny

snowy

cloudy

4 What is the weather like? Look and write.



5 What is your favorite weather?
Why? Talk as a class.



I Will Know...

6 Read. What is a season? Say with a partner.

Seasons

The weather can change at different times of the year. These times of the year are called **seasons**. Four seasons are fall, winter, spring, and summer. In some places, leaves change color in fall. Winter is cold and snowy in some places. In spring, trees and plants can get flowers. Summer can be hot in some places.

7 Look at the pictures. Trace the words.



spring



summer



fall



winter

- 8** Read. How many seasons are there where you live? Talk as a class.

Seasons in Different Places

Seasons are different around the world. Some places have summer when other places have winter. Some places are too hot to have snow. Some places have a rainy season and a season when it doesn't rain a lot.



- 9** What season is it now? What is the weather like? Draw.

Think!

*Does the sky change
at different times
of the year?*



Materials

construction
paper



crayons



cotton balls
and glue



Let's Investigate!

What do the day and night skies look like?

1. Label *Day* and *Night*.
2. Make.
3. Compare.
4. Draw and mark (✓).

What is in the sky?

Object	Day	Night



What are Earth and the sky like?

Lesson 1

What makes up Earth?

- 1 What is one kind of land on Earth? What is one kind of water? Look at the pictures. Write.



a)  _____



b)  _____

Lesson 2

What can you see in the day and night skies?

- 2 What is one thing you cannot see in the night sky? Say with a partner.

Lesson 3

What is weather? What are the seasons?

- 3 Read and complete.

You need an umbrella when it's  _____.



Unit 7

Objects



What are objects like?

I will learn

- what some objects are like.
- how to group some objects.
- some ways to use objects.

1 Look at the jungle gym. What colors and shapes can you see? Talk with a partner.



2 What are some ways you can group objects? Talk with a partner.

3 How many different materials are there in your classroom? Talk as a class.



Lesson 1 • What are objects made of?

- 1 Read. How can you tell the size, shape, and color of an object?
Say with a partner.

Senses and Objects

You can use your senses to learn about objects. You can hear how objects sound. You can see their size, shape, and color. You can tell how much objects **weigh**. Some objects are **heavy**. Some objects are **light**. You can tell how objects feel. Some objects are rough. Some are smooth.

- 2 How can you tell if something is heavy or light? Talk with a partner.



- 3 Look at the pictures. What is rough? Circle. How can you tell?



Key Words

- weigh
- heavy
- light
- wood
- plastic
- metal
- glass

- 4 Read. What are some objects made of?
Say with a partner.

What Objects Are Made Of

Your senses help you tell what objects are made of. Objects are made of different materials. Some objects are made of **wood**. Desks and chairs can be made of wood. Some objects are made of **plastic**. Straws can be made of plastic. Some objects are made of **metal**. Forks, knives, and spoons can be made of metal. Some objects are made of **glass**. Windows are usually made of glass.



- 5 Look at the pictures. Write what each object is made of.



plastic



metal



glass

Think!

What material is a door made of? What material is a handle made of?

6 Look at the pictures. Match the objects with the materials.



fork



desk



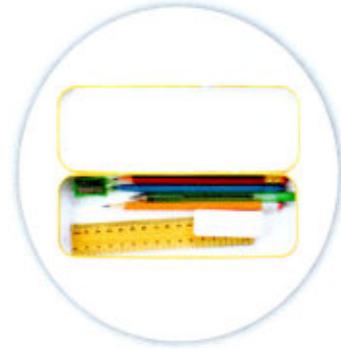
window

wood

glass

metal

7 What objects are made of plastic?
Say as a class.



8 Circle *T* (true) or *F* (false).
Say as a class.

- a) Windows are usually made of metal.
- b) You can feel if things are rough.
- c) You can hear how some objects sound.

T / F

T / F

T / F

Flash Lab

Look around the classroom. Find one object made of wood. Find one object made of metal. Find one object made of plastic.



Lesson 2 • How can you sort objects?

Key Words

- sort

1 Read. What does sort mean? Say.

Sort Objects

You can **sort** objects, or put them into groups. You can sort objects by how they are alike. You can sort them by color, size, or shape. You can sort them by the material they are made of or by how much they weigh. You can even sort objects by how they sound!

2 Look at the pictures. Circle what you can do to sort the objects.



hear/touch



taste/hear



taste/hear



touch/taste



see/smell



hear/taste

3 Look. Make two or more groups. How are the objects in the groups the same?



4 Read and draw objects in the three groups.

They smell bad.

They feel smooth.

They are light.



- 5** Read. Look at the pictures. What do you think weighs a lot? Circle.



Weigh Objects

You can weigh things to find out how heavy they are. A balance can help you weigh objects. Then you can sort objects into heavy groups and light groups. A feather can be light. A television can be heavy.

- 6** Read. Look at the pictures. What do you think makes a loud sound?

Observe Sound

You can sort things by how they sound. Some things make soft sounds. Some things make loud sounds.



Lesson 3 • How do we use some objects?

- 1 Read. Why are some round objects good to use as wheels? Say with a partner.

How to Use Some Objects

You can use different objects for different things. The shape or material of an object can tell you how you can use it.

Round Objects

Round objects do not have sides. They can roll. You use some round objects as wheels.

- 2 Do you think square objects are good to use as wheels? Why? Say as a class.
- 3 What other things can round objects be used for? Say as a class.

Key Words

- round
- square
- strong
- see through
- clay
- sticky
- wool



- 4** Read. What are some things that are made of wood?
Say with a partner.

Wood

Wood can be **strong**.
We use wood to build
houses. We use wood
to build furniture.



table



chair

- 5** Read. What do you think the bus is
made of? Why? Talk as a class.

Metal

Some metal is very strong. We use
metal to make things we want to be
very strong.



- 6** Read. What are some things that are
made of glass? Say with a partner.

Glass

You can **see through** glass.
Glass is a good material for
things we want to see through.



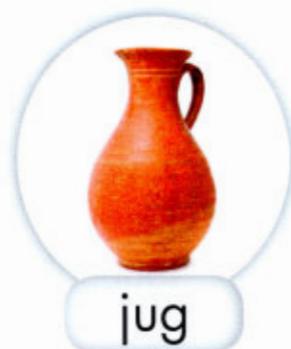
- 7** Read. Why is clay a good material to mold things? Talk as a class.

Clay

Clay is **sticky**. You can mold it. It keeps the shape you make. You can make a jug out of clay.



clay



jug

- 8** Read. Why are some clothes made of wool? Talk with a partner.

Wool

Some things are made of **wool**. Wool comes from sheep. Wool is warm. We cut wool from sheep to make warm clothes. Sweaters can be made of wool.



sweater



sheep



wool

- 9** Do you have any clothes made of wool? Say with a partner.



Materials



balance with cups



*crayon
and plastic
spoon*



*hand lens
and clay*



*rubber ball and
table tennis ball*

Let's Investigate!

Which object is heavier?

1. Put.
2. Look.
3. Say.
4. Put.
5. Look.





What are objects like?

Lesson 1

What are objects made of?

1 Look and write.

plastic

wood



It is made of



_____.

Lesson 2

How can you sort objects?

2 Circle the objects that can go in a group. Say why.



phone



plate



book



sign

Lesson 3

How do we use some objects?

3 What is a good material for warm clothes? Circle.

wood

metal

wool

Unit 8

Matter and Mixtures



What are matter and mixtures?

I will learn

- about solids, liquids, and gases.
- how water can change.
- about mixtures.

1 Circle the object that is strong and solid.



2 Look at the pictures. After the boy cuts shapes, are they still paper? Talk as a class.



3 Circle what you can mix in a bowl and eat for breakfast.



Think!

Is this a mixture?

Lesson 1 • What are solids, liquids, and gases?

1 Read. What are two examples of matter? Say with a partner.

Matter

Matter is all around us. **Matter** is what all things are made of. The book that you are reading is made of matter. The air around you is made of matter. Materials like wood, metal, plastic, and wool are matter. There are different kinds of matter. Three kinds of matter are solids, liquids, and gases.

Key Words

- matter
- solid
- liquid
- container
- gas



A building block is a solid.



Milk is a liquid.



The air in bubbles is a gas.

2 Look at the pictures of the juice and the fruit. Are they liquids or solids? Say with a partner.



3 Read. What is a solid? Say with a partner.

Solids

Solids are one kind of matter.

Solids keep their shape.

A table is a solid. You can move the table. It still keeps its shape. You can make a house with building blocks. The blocks keep their shape.

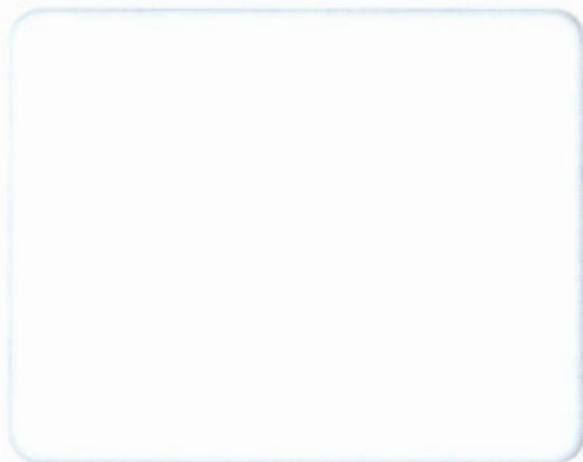


The table is a solid.



The building blocks are solids.

4 Draw two solids in the classroom. What are they?



5 What are the solids in your drawings like? What color are they? What size are they? What shape are they? Talk with a partner.

6 Read. Is water a liquid? Say with a partner.

Liquids

Liquids are a kind of matter. **Liquids** take the shape of their **containers**. Water is a liquid. You can put water into a fish bowl. It takes the shape of the fish bowl.



The liquid takes the shape of its container.



The water takes the shape of the fish bowl.

7 Look at the picture of the fish bowl. What is solid? What is liquid? Say as a class.

8 What are some other liquids? Make a list with a partner.

9 Color a liquid in this straw. What shape does the liquid take?



Flash Lab

Pour water from a small bottle into a large glass. Does the water take the shape of the glass?

- 10** Read. How are gases different from liquids?
Say with a partner.

Gases

Gases are a kind of matter. **Gases** take the shape of their containers, too. They fill the whole container! Balloons can be filled with gas. The gas fills the whole balloon. The air we breathe is a gas. It is all around us.



Gas fills these balloons!

- 11** Which of these things are filled with gas? Circle.



- 12** Look at the balloons. What happens if you blow them up? Say as a class.



- 13** Look around the classroom. Are there things filled with gas? Talk as a class.

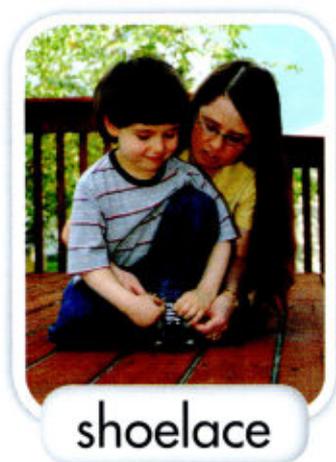
Lesson 2 • How can matter change?

- 1 **Read.** You make a shape with modeling clay. Is it still modeling clay? Talk with a partner.

Properties of Matter Can Change

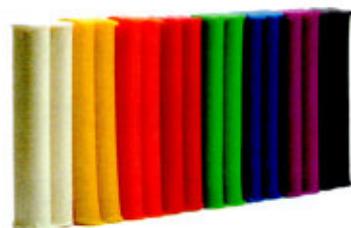
Matter can change. Paper is a kind of matter. You can cut paper into different sizes. It is still paper. Modeling clay is also a kind of matter. You can mold modeling clay into different shapes. You can stretch it. It is still modeling clay. It is the same kind of matter.

- 2 **Fold a piece of paper in half. Then fold it again.** Is it still paper? Talk with a partner.
- 3 **You can tie your shoelace.** Is it still a shoelace? Talk with a partner.



Key Words

- freeze
- ice
- melt
- boil



You can make numbers with the modeling clay!



- 4 Read. How does water change into ice? Say with a partner.

Water Can Freeze

Water is matter. Water can be solid, liquid, or gas.

When liquid water gets very cold, it **freezes**. It changes into a solid. Solid water is called **ice**.



The water in the glass is a liquid.



Water can change into solid ice.

- 5 Mark (✓) the picture that shows solid water.



- 6 Water can change from a liquid to a solid.

It can _____.

freeze

melt



Think!

Look at the picture.
Does the liquid
change?

- 7 Read. How does ice change into water?
Say with a partner.

Water Can Melt and Boil

When ice gets warm it **melts**. The ice changes from a solid into a liquid. It is liquid water again.

When liquid water gets very hot, it **boils**. The water changes from a liquid into a gas.



melt



boil

- 8 Look at the sentences. Write.

solid

liquid

liquid

gas

- a) When ice melts, it changes from a _____
_____ into a _____.



- b) When water boils, it changes from a _____
_____ into a _____.



Think!

Why does the
snowman melt?



Lesson 3 • What is a mixture?

- 1 Read. Look at the picture of the salad. Mark (✓) the food that is in the salad.

Mixtures

You can put different kinds of matter together to make a **mixture**. A salad is a mixture. It has different vegetables in it. Soup is a mixture, too! You can mix solids with solids. You can mix liquids with liquids. You can mix liquids with solids.

Key Words

- mixture



soup



salad



- 2 What is in the soup? Are there solids, liquids, or gases? Say with a partner.



- 3** Some mixtures have two kinds of matter. Think of some examples. Talk as a class.
- 4** Look at the picture. What kinds of matter are there? Talk as a class.



At-Home Lab

What foods do you eat at home? Which ones are mixtures? Talk about it with your family.

- 5** Look at the picture of sand and shells. Is it a mixture?
- 6** Pretend you put the shells and sand in different groups. Is there still a mixture? Talk as a class.



- 7** Look at the picture. Are the crayons a mixture? Why or why not? Talk in small groups.



Materials

sheets of
white paper



rice and beans



cup

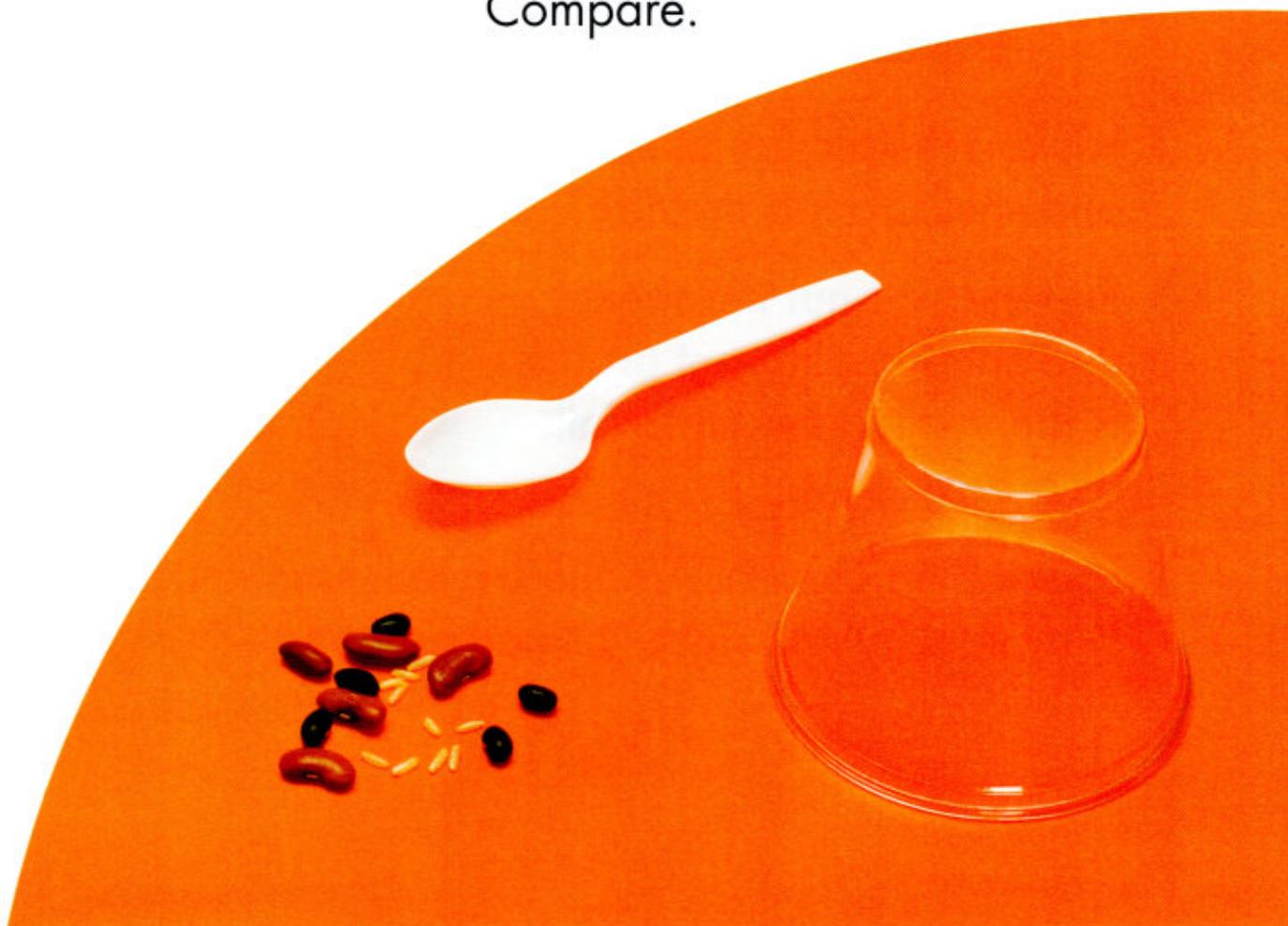


spoon

Let's Investigate!

What is in a mixture?

1. Count.
Write.
Mix.
2. Group.
3. Count.
Write.
Compare.





What are matter and mixtures?

Lesson 1

What are solids, liquids, and gases?

1 Look and write *solid*, *liquid*, or *gas*.



Lesson 2

How can matter change?

2 Look at the pictures. Match.

a) Water changes from a liquid to a gas.

b) Ice changes from a solid to a liquid.



Lesson 3

What is a mixture?

3 Look at the pictures. Mark (✓) the mixture.



Unit 9

Motion



What are position and motion?

I will learn

- about position.
- about how objects move.
- about magnets.

1 Look at picture 1. Look at picture 2. What changes? Talk as a class.



1



2

2 Look at the pictures. What moves fast? Mark (✓).



turtle



tricycle



plane



car



motorcycle

3 Look. What happens to the paper clips? Say as a class.



Think!

Does the ball move on its own?

Lesson 1 • What can you tell about an object's position?

Key Words

- position
- on
- above
- below
- in front of
- behind
- next to

- 1 Read. Look at picture 2. Where is the ball? Say with a partner.

Above and Below

Position is where objects are. An object can be on another object. An object can be above another object. An object can be below another object. Look at picture 1. The apple is **on** the paper. The apple is **above** the books. The books are **below** the apple.



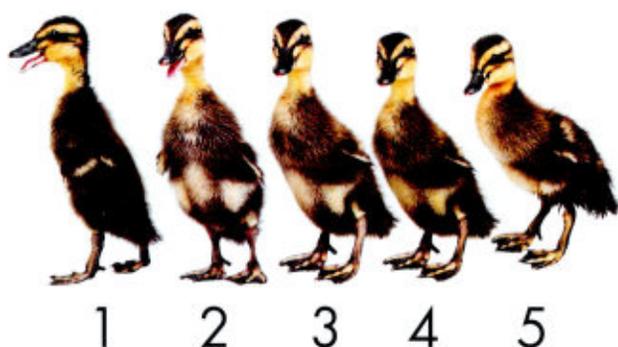
- 2 Look around the classroom. What is above you? What is below you? Talk as a class.
- 3 Pretend you are outside. What is above you? What is below you? Talk with a partner.



- 4 Read. Look at the picture of the ducklings. Draw another duckling behind duckling number 5.

In Front of and Behind

Look at the ducklings. Duckling number 1 is **in front of** the other ducklings. The other ducklings are **behind** duckling number 1.



- 5 Look at the photo of the boy and his sled. Where is the boy? Circle.

The boy is **in front of/behind** the sled.



- 6 Get in a line at the front of the classroom. Who is in front of you? Who is behind you? Say.

Flash Lab

Go around the classroom. Find an object that is in front of another object. Tell a partner about the position of each object.

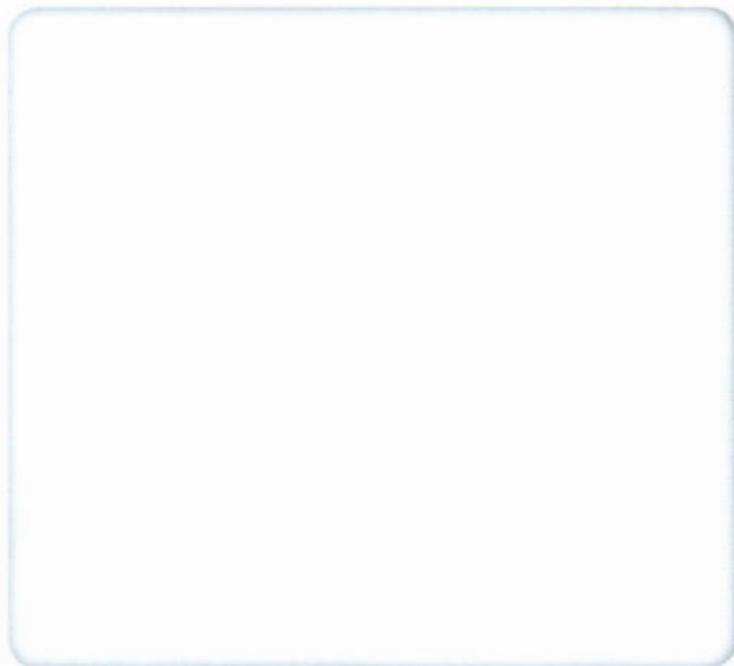
- 7** Read. Where is the blue bird?
Say with a partner.

Next To

The purple bird is **next to** the green and black bird. The white bird is next to the green and black bird. The green and black bird is next to the purple bird and the white bird.



- 8** Where is the yellow and green bird? How many birds are next to it? Say as a class.
- 9** Pretend you are at home in your bed. What is next to you? Draw.



Think!

Can an object be above and next to another object?



Lesson 2 • What are some ways objects move?

Key Words

- push
- pull
- away from
- fast
- toward
- slow

1 Read. Think of three things you push. Say with a partner.

Push

You can use a **push** to move an object. Look at the pictures. The boy is behind the toy car. He pushes it. He makes it move! A push can move an object **away from** you. The mother pushes the swing away from herself. She makes the swing move. Then it comes back **toward** her!



2 Look at the pictures. Match.

The boy kicks the ball away from himself.



The ball comes toward the child.



Think!

Can you be below something you push?

3 Read. What does a pull do? Say with a partner.

Pull

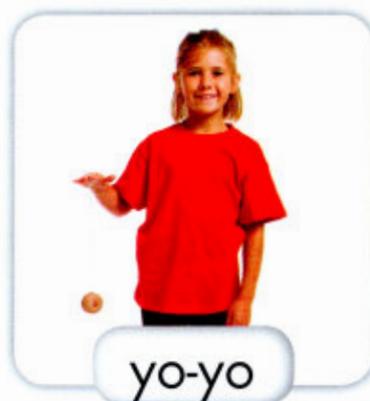
You can use a **pull** to move an object, too. The children pull the wagon. The girl is in front of the sled she pulls. A pull can move an object **toward** you. The children pull the rope. It moves toward them.



4 Look at pictures 1–4. Mark (✓) the pictures that show a pull.



5 Look at the picture. Does the girl push or pull the yo-yo? Talk with a partner.



6 Look at the pictures that show pushes and pulls.
Match.



push

pull

7 How are a push and a pull alike? Talk as a class.

8 You push or pull an object. What happens to its position? Talk as a class.



At-Home Lab

What things do you push and pull at home? Talk with your family.

- 9 Read. What are some things you can make move fast?
Talk as a class.

Fast and Slow

A push or pull can change the position of an object. A push or pull can change how an object moves. A push or pull can make an object move **fast** or **slow**.



The train moves fast.



The tricycle moves slow.

- 10 Do these things move fast or slow?
Say with a partner.



1



2

Think!

Look at pictures 1 and 2.
Is it easier to push or pull
the sled? Why?



Lesson 3 • What are magnets?

- 1 Read. What does attract mean?
Say with a partner.

Magnets Attract

Magnets attract some metal objects.

Attract means to pull toward.

Magnets attract paper clips and screws. Magnets do not attract objects that are not made of metal, like crayons. They do not attract some metal objects, like pennies.

Key Words

- magnet
- attract
- repel



Magnets attract paper clips and screws.



Magnets do not attract erasers, pencils, or copper pennies.

- 2 What objects do magnets attract? What objects do magnets not attract? Talk as a class.
- 3 Look around the classroom. Find two things a magnet attracts and three things it does not attract.

4 Mark (✓) the objects magnets attract.

Object	Attract	Don't Attract
paper clip 		
building block 		
nail 		
crayon 		
screw 		
copper coin 		

5 Read. What does repel mean?
Say with a partner.

Magnets Repel

Sometimes a magnet attracts another magnet. Sometimes a magnet repels another magnet. **Repel** means to push away.

6 Draw a magnet. Draw arrows to show that it attracts something.



The magnet attracts another magnet.



The magnet repels another magnet.

Materials

sheets of
white paper



crayons



toy car

Let's Investigate!

How can you move the car?

1. Push.
Push hard.
Tell.
2. Pull.
Pull hard.
Tell.
3. Draw.





Lesson 1

What can you tell about an object's position?

1 Look.

The blue bird is _____ the white bird. Circle.



in front of

above

next to

Lesson 2

What are some ways objects move?

2 Look at the girl on the skateboard. What makes her move? Circle.



a push

a pull

a magnet

Lesson 3

What are magnets?

3 Read and complete.

pull toward

push away

Attract means to



Repel means to





Unit 1 The Nature of Science

- answers** What we find out. We find answers to questions.
- chart** A way you can record information.
- collect (v)** To get something like information. Scientists collect data.
- compare (v)** To say how things are alike and different.
- data** The information that scientists collect.
- group (v)** To put things that are alike together.
- measure (v)** To tell how long, how much, how heavy, or how tall something is.
- objects** Things.
- observe (v)** To find out about things.
- questions** What we want to find out. We ask questions to find answers.
- record (v)** To write down or draw what we observe about something.
- science** A way we can learn about the world around us.
- scientist** A person who observes and asks questions about the world around us.
- senses** There are five senses. We can see, touch, taste, smell, and hear.
- tools** Objects that can help us. For example, a ruler helps us measure things.



Unit 2 Solve Problems

change (v) To make something different, or to make something become different. We can change something about a design. Living things grow and change.

choose (v) To pick or select things. We can choose the tools we need.

design A kind of drawing. The boy makes a design of his pencil holder.

idea Something we think. We can have an idea how to solve a problem.

materials Things we can use to make something. We can make straws out of plastic materials.

plan A way we choose to solve something.

problem Something we want to solve. We need to fix a problem.

share (v) To tell, show, or give to other people. Scientists can share their data and solutions.

solution An answer to a problem.

solve (v) To find a way to fix a problem.

test (v) To find out if an answer or solution is correct.

use (v) To try or test something. We can use the pencil holder to see if it works.



What can you say
about living things?

Unit 3 Living and Nonliving Things

- beaks** Hard body parts of birds and some other animals.
- body coverings** Things that cover an animal's body, like fur or feathers.
- feathers** The soft things that cover a bird's body.
- fins** A body part of a fish and some other animals.
- flowers** The colored or white parts of a plant or tree.
- fur** The hair that covers some animals' bodies.
- grow (v)** To get bigger or taller or to change.
- leaves** The flat, green parts of a plant.
- living** Something that grows, changes, and moves on its own.
- move (v)** To go from one place to another place.
- need** Living things need food, water, space, and air.
- nonliving** Something that does not grow, change, or move on its own.
- paws** The feet of some animals like dogs.
- petals** Parts of flowers.
- roots** The parts of a plant or tree that grow under the ground.
- seeds** The things some plants make to make new plants of the same kind.
- stems** The parts of plants that hold up their leaves and flowers.
- trunks** The thick stems that trees have.
- wings** Body parts of birds and some other animals.



Unit 4 Plants and Animals

- adult** A grown-up plant or animal.
- butterfly** A type of bug that has wings, often with different colors.
- caterpillar** A young butterfly. A caterpillar changes into a butterfly.
- chrysalis** What a caterpillar changes into before it turns into a butterfly.
- frog** A small animal that lives near water and has long legs for jumping.
- fruit** The part of a plant that covers the seeds. We can eat some fruit, like apples.
- hatch** To come out of an egg.
- lay eggs (v)** To make eggs come out of the body. A hen lays eggs.

- life cycle** The way an animal or plant grows and changes through its life.
- look like (v)** To be similar to something else in appearance.
- life cycle** The way an animal or plant grows and changes through its life.
- parents** Plants or animals that have young.
- seedling** A young plant or tree that grows from a seed.
- tadpole** A young frog. A tadpole looks different from its parents.



Unit 5 Body and Senses

energy What we get from food. We need energy to grow and do things, like run and play.

exercise (v) To move our bodies. We exercise when we run, skip, play soccer, or swim.

feel (v) To tell what things are like with our skin or hands. We can feel if something is cold or hot.

healthy Things that are good for us are healthy.

hear (v) To detect things with our ears. We hear birds, cars, or music.

see (v) To detect things with our eyes. We can see colors and shapes.

shelter Somewhere that can keep living things safe and warm.

skin The body part that we feel things with.

sleep (v) To rest with our eyes closed.

smell (v) To detect things with our noses. We can smell a flower.

taste (v) To detect things with our tongues. We can taste food.

tongue The body part we use to taste things.

touch (v) To detect things with our skin. We can touch the fur of a puppy.



What are Earth and the sky like?

Unit 6 Earth and Sky

- clear** The sky is clear when there are no clouds.
- clouds** The white or gray shapes in the sky.
- cloudy** It is cloudy when there are clouds in the sky.
- Earth** Where we live. Earth is our home planet.
- lake** Water that has land all around it.
- land** The part of Earth that is made of soil and rocks.
- moon** The round object we can see in the sky at night.
- ocean** The water that covers a lot of Earth.
- rainy** It is rainy when there is water falling from the sky.
- river** Water that travels across land to the sea.
- seasons** Different times of year with different kinds of weather.
- sky** What is above us when we are outside. We can see things like clouds or stars in the sky.
- snowy** It is snowy when there is frozen water falling from the sky or on the ground.
- stars** Objects that make light in the night sky.
- sun** The round yellow object we can see in the sky in the day.
- sunny** It is sunny when the sun is in the sky and there are not a lot of clouds.
- swamp** A place that has soft, wet land and can have many plants.
- weather** What it is like outside.
- windy** It is windy when the air moves strongly in one direction.



Unit 7 Objects

- clay** A sticky material from Earth. You can make clay into shapes.
- glass** A clear material. Windows are made of glass.
- heavy** Something that weighs a lot is heavy.
- light** Something that doesn't weigh a lot is light.
- metal** A hard material. Spoons, knives, and forks are usually made of metal.
- plastic** A light material. Water bottles are usually made of plastic.
- round** Something that is shaped like a circle is round. Wheels are round.
- see through (v)** You can see through something that is clear. We can see through glass.
- sort (v)** To put things into groups.
- square** A shape with four sides that are the same length.
- sticky** Something that attaches to other things is sticky.
- strong** Something that can resist force is strong. Metal is a strong material.
- weigh (v)** To find out how heavy something is.
- wood** A strong material that comes from trees. Pencils are usually made of wood.
- wool** A material that comes from the fur of sheep. You can use wool to make a sweater.



Unit 8 Matter and Mixtures

boil (v) To make a liquid very hot so that we see bubbles in it.

container Something you can put things in to hold them.

freeze (v) To make a liquid very cold so that it changes into a solid.

gas A kind of matter that fills its container. Gas can fill a ball.

ice Water changes into ice when it freezes.

liquid A kind of matter that takes the shape of its container. Milk is a liquid.

matter What things are made of. Matter can be solid, or liquid, or gas.

melt (v) To warm something so that it changes from a solid into a liquid. Ice can melt and change into water.

mixture Different kinds of matter put together. A salad is a mixture of different vegetables.

solid A kind of matter that keeps its own shape. A table is a solid.



Unit 9 Motion

above When one thing is higher than another thing. The sky is above us.

attract (v) To pull toward. A magnet attracts some metal objects.

away from When something moves away from us, it moves to another place.

behind When one thing is in back of another thing.

below When one thing is under another thing. The ground is below my feet.

fast When something travels from one place to another in a short time, it moves fast.

in front of When one thing is ahead of another thing.

magnet A piece of metal that pulls some other metals toward it.

next to On one side of something. I can sit next to my classmate.

on When one thing is above and touching another thing. I can sit on a chair.

position Where an object is.

pull (v) To move something, usually toward us.

push (v) To move something, usually away from us.

repel (v) To force or push something away.

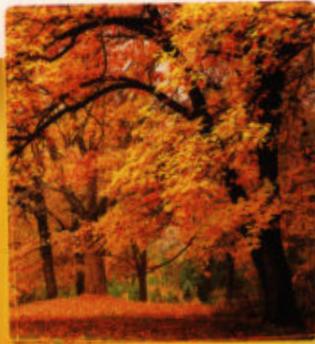
slow When something moves from one place to another over a long time, it moves slow.

toward When something moves toward us, it moves in our direction.

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