Grade 1

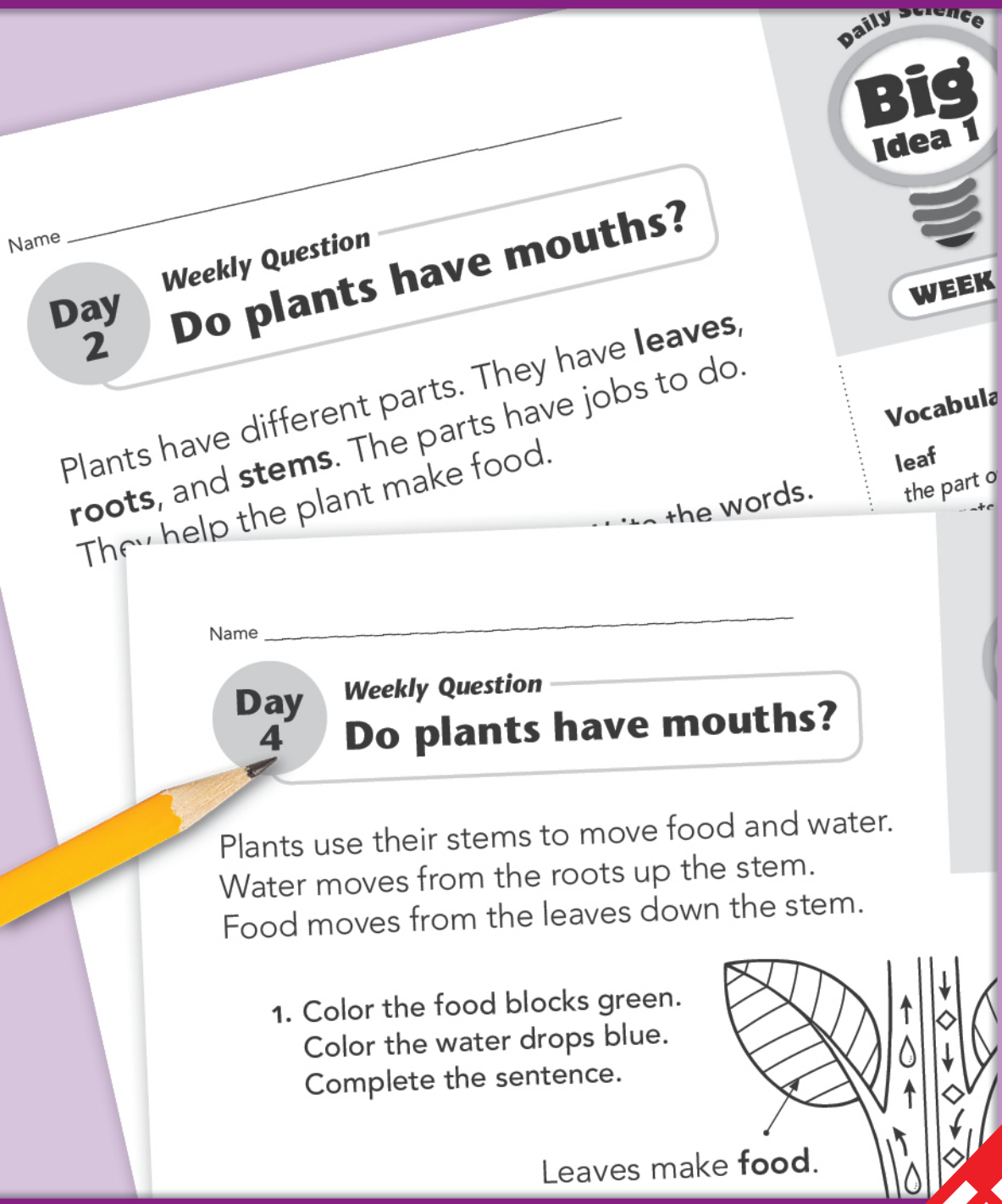
Evan-Moor
EMC 5011

# Daily Science

GRADE 1

*Correlated to State and Common Core State Standards*

- 6 Big Idea units with:
  - 4 standards-based weekly lessons
  - 24 activity pages
  - teacher lesson plans
- Content vocabulary, comprehension, and visual literacy practice
- 6 hands-on activities




M T W T

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## *Daily Science*
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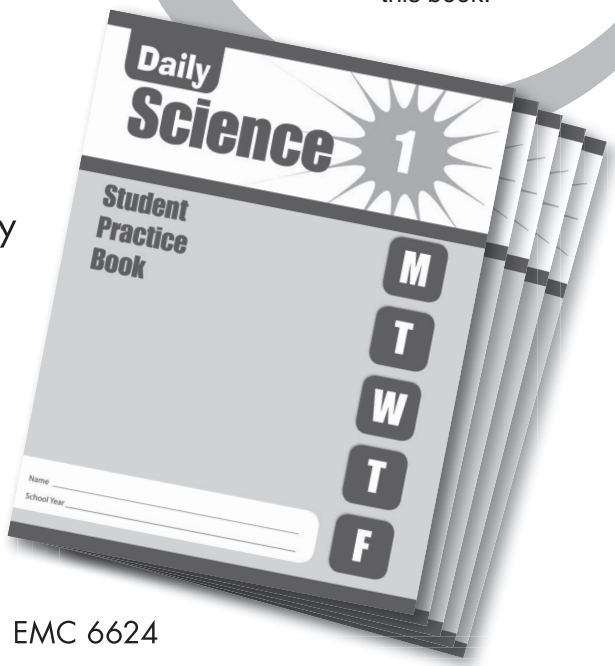


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|---|---|---|---|
| Grade 1 | EMC 6621 | Grade 4 | EMC 6624 |
| Grade 2 | EMC 6622 | Grade 5 | EMC 6625 |
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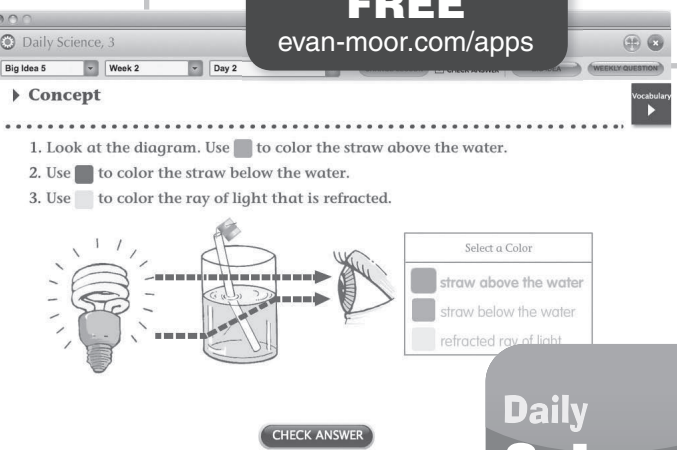


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# Daily Science

GRADE 1

Editorial Development: Penny Atcheson
James Spears
Andrea Weiss
Copy Editing: Roseann Erwin
Cathy Harber
Art Direction: Cheryl Puckett
Illustration: Ruth Linstromberg
Design/Production: Susan Lovell
Olivia C. Trinidad
John D. Williams

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# Contents

# What's in This Book?

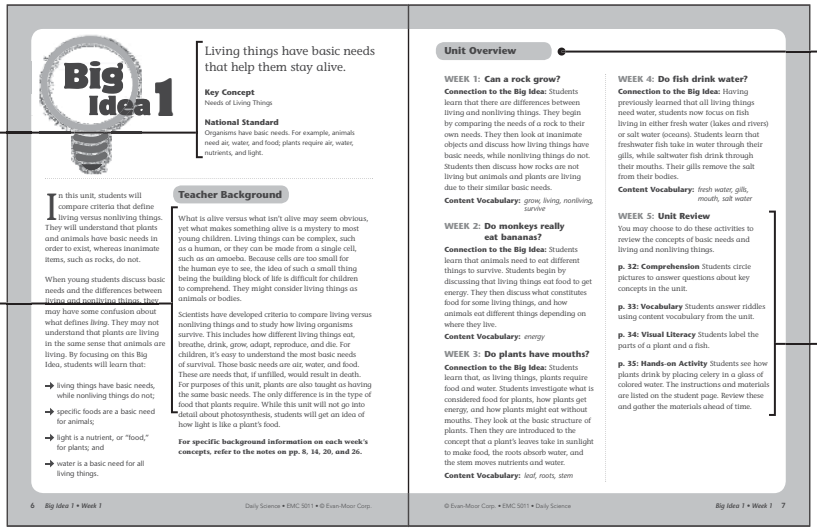
*Daily Science* provides daily activity pages grouped into six units, called Big Ideas, that explore a wide range of topics based on the national standards for life, earth, and physical sciences. Every Big Idea includes five weekly lessons. The first four weeks each center around an engaging question that taps into students' natural curiosity about the world to develop essential concepts and content vocabulary. The fifth week of each unit offers a hands-on activity and review pages for assessment and extra practice.

The short 10- to 15-minute activities in *Daily Science* allow you to supplement your science instruction every day while developing reading comprehension and practicing content vocabulary.

## Unit Introduction

Key science concepts and national science standards covered in the unit are indicated.

Background information is provided on the topic, giving you the knowledge you need to present the unit concepts confidently.



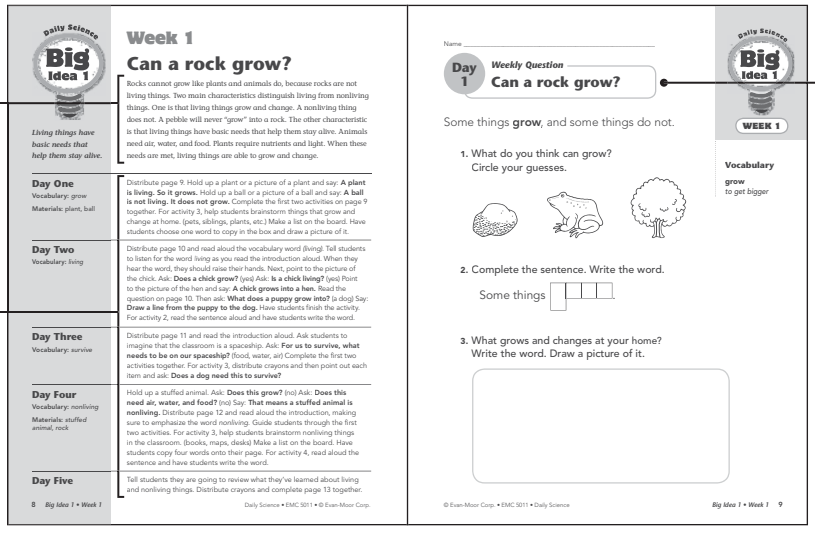

An overview of the four weekly lessons shows you each weekly question, explains what students will learn, and lists content vocabulary.

Week five review activities are summarized.

## Weekly Lessons (Weeks 1–4)

Each week begins with a teacher page that provides additional background information specific to the weekly question.

Ideas are given for presenting the daily activity pages, including content vocabulary and materials needed for any demonstrations or group activities.



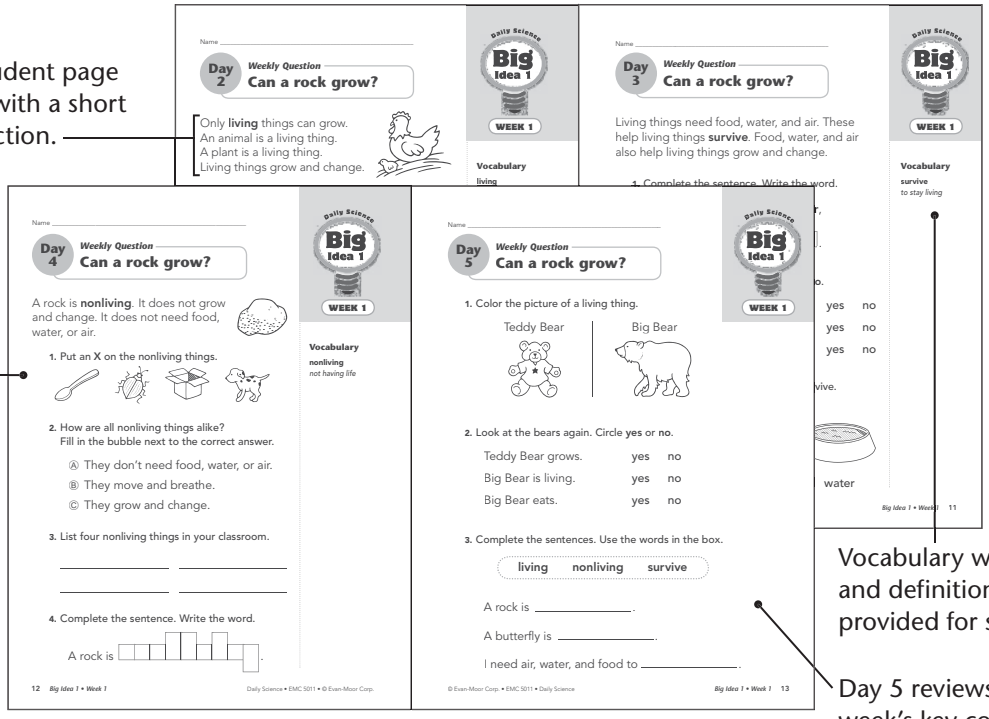

The student activity pages for Days 1–4 of each week use an inquiry-based model to help students answer the weekly question and understand fundamental concepts related to the Big Idea.

You may wish to have students complete the pages independently or collaboratively.

# Weekly Lessons, continued

Each student page begins with a short introduction.

Activities include a variety of writing, comprehension, vocabulary, critical thinking, visual literacy, and oral language practice.




Vocabulary words and definitions are provided for students.

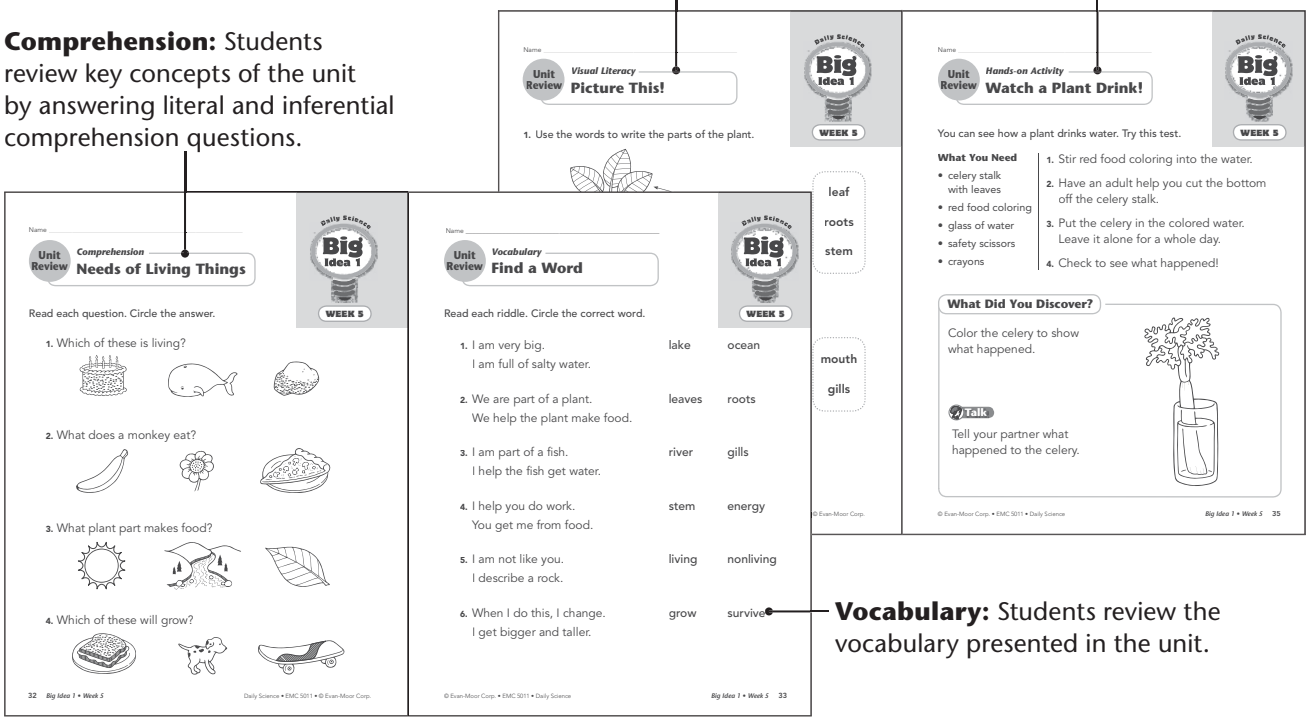
Day 5 reviews the week's key concepts and vocabulary.

# Unit Review (Week 5)

**Visual Literacy:** Students practice skills such as labeling diagrams, reading captions, and sequencing steps in a process.

**Hands-on Activity:** Students participate in a hands-on learning experience.

**Comprehension:** Students review key concepts of the unit by answering literal and inferential comprehension questions.




**Vocabulary:** Students review the vocabulary presented in the unit.


# Living things have basic needs that help them stay alive.

**Key Concept**
Needs of Living Things

**National Standard**
Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light.

In this unit, students will compare criteria that define living versus nonliving things. They will understand that plants and animals have basic needs in order to exist, whereas inanimate items, such as rocks, do not.

When young students discuss basic needs and the differences between living and nonliving things, they may have some confusion about what defines *living*. They may not understand that plants are living in the same sense that animals are living. By focusing on this Big Idea, students will learn that:

- living things have basic needs, while nonliving things do not;
- specific foods are a basic need for animals;
- light is a nutrient, or "food," for plants; and
- water is a basic need for all living things.

## Teacher Background

What is alive versus what isn't alive may seem obvious, yet what makes something alive is a mystery to most young children. Living things can be complex, such as a human, or they can be made from a single cell, such as an amoeba. Because cells are too small for the human eye to see, the idea of such a small thing being the building block of life is difficult for children to comprehend. They might consider living things as animals or bodies.

Scientists have developed criteria to compare living versus nonliving things and to study how living organisms survive. This includes how different living things eat, breathe, drink, grow, adapt, reproduce, and die. For children, it's easy to understand the most basic needs of survival. Those basic needs are air, water, and food. These are needs that, if unfulfilled, would result in death. For purposes of this unit, plants are also taught as having the same basic needs. The only difference is in the type of food that plants require. While this unit will not go into detail about photosynthesis, students will get an idea of how light is like a plant's food.

**For specific background information on each week's concepts, refer to the notes on pp. 8, 14, 20, and 26.**

## Unit Overview

### WEEK 1: Can a rock grow?

**Connection to the Big Idea:** Students learn that there are differences between living and nonliving things. They begin by comparing the needs of a rock to their own needs. They then look at inanimate objects and discuss how living things have basic needs, while nonliving things do not. Students then discuss how rocks are not living but animals and plants are living due to their similar basic needs.

**Content Vocabulary:** *grow, living, nonliving, survive*

### WEEK 2: Do monkeys really eat bananas?

**Connection to the Big Idea:** Students learn that animals need to eat different things to survive. Students begin by discussing that living things eat food to get energy. They then discuss what constitutes food for some living things, and how animals eat different things depending on where they live.

**Content Vocabulary:** *energy*

### WEEK 3: Do plants have mouths?

**Connection to the Big Idea:** Students learn that, as living things, plants require food and water. Students investigate what is considered food for plants, how plants get energy, and how plants might eat without mouths. They look at the basic structure of plants. Then they are introduced to the concept that a plant's leaves take in sunlight to make food, the roots absorb water, and the stem moves nutrients and water.

**Content Vocabulary:** *leaf, roots, stem*

### WEEK 4: Do fish drink water?

**Connection to the Big Idea:** Having previously learned that all living things need water, students now focus on fish living in either fresh water (lakes and rivers) or salt water (oceans). Students learn that freshwater fish take in water through their gills, while saltwater fish drink through their mouths. Their gills remove the salt from their bodies.

**Content Vocabulary:** *fresh water, gills, mouth, salt water*

### WEEK 5: Unit Review

You may choose to do these activities to review the concepts of basic needs and living and nonliving things.

**p. 32: Comprehension** Students circle pictures to answer questions about key concepts in the unit.

**p. 33: Vocabulary** Students answer riddles using content vocabulary from the unit.

**p. 34: Visual Literacy** Students label the parts of a plant and a fish.

**p. 35: Hands-on Activity** Students see how plants drink by placing celery in a glass of colored water. The instructions and materials are listed on the student page. Review these and gather the materials ahead of time.


# Week 1

# Can a rock grow?

*Living things have basic needs that help them stay alive.*

Rocks cannot grow like plants and animals do, because rocks are not living things. Two main characteristics distinguish living from nonliving things. One is that living things grow and change. A nonliving thing does not. A pebble will never "grow" into a rock. The other characteristic is that living things have basic needs that help them stay alive. Animals need air, water, and food. Plants require nutrients and light. When these needs are met, living things are able to grow and change.

## Day One

**Vocabulary:** *grow*

**Materials:** plant, ball

Distribute page 9. Hold up a plant or a picture of a plant and say: **A plant is living. So it grows.** Hold up a ball or a picture of a ball and say: **A ball is not living. It does not grow.** Complete the first two activities on page 9 together. For activity 3, help students brainstorm things that grow and change at home. (pets, siblings, plants, etc.) Make a list on the board. Have students choose one word to copy in the box and draw a picture of it.

## Day Two

**Vocabulary:** *living*

Distribute page 10 and read aloud the vocabulary word *(living)*. Tell students to listen for the word *living* as you read the introduction aloud. When they hear the word, they should raise their hands. Next, point to the picture of the chick. Ask: **Does a chick grow?** (yes) Ask: **Is a chick living?** (yes) Point to the picture of the hen and say: **A chick grows into a hen.** Read the question on page 10. Then ask: **What does a puppy grow into?** (a dog) Say: **Draw a line from the puppy to the dog.** Have students finish the activity. For activity 2, read the sentence aloud and have students write the word.

## Day Three

**Vocabulary:** *survive*

Distribute page 11 and read the introduction aloud. Ask students to imagine that the classroom is a spaceship. Ask: **For us to survive, what needs to be on our spaceship?** (food, water, air) Complete the first two activities together. For activity 3, distribute crayons and then point out each item and ask: **Does a dog need this to survive?**

## Day Four

**Vocabulary:** *nonliving*

**Materials:** stuffed animal, rock

Hold up a stuffed animal. Ask: **Does this grow?** (no) Ask: **Does this need air, water, and food?** (no) Say: **That means a stuffed animal is nonliving.** Distribute page 12 and read aloud the introduction, making sure to emphasize the word *nonliving*. Guide students through the first two activities. For activity 3, help students brainstorm nonliving things in the classroom. (books, maps, desks) Make a list on the board. Have students copy four words onto their page. For activity 4, read aloud the sentence and have students write the word.

## Day Five

Tell students they are going to review what they've learned about living and nonliving things. Distribute crayons and complete page 13 together.

Name _____

Daily Science
Big Idea 1
WEEK 1

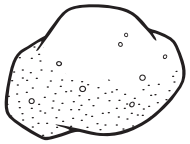
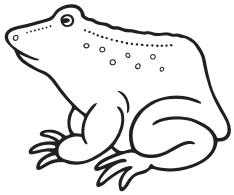
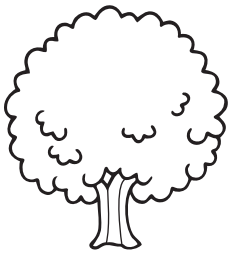
**Day 1**

***Weekly Question***

# Can a rock grow?

Some things **grow**, and some things do not.

**1.** What do you think can grow?
Circle your guesses.

**2.** Complete the sentence. Write the word.

Some things ☐☐☐☐.

**3.** What grows and changes at your home?
Write the word. Draw a picture of it.

**Vocabulary**

**grow**
*to get bigger*

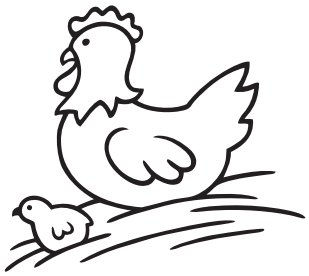
Name _____

Day 2

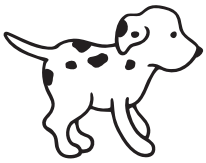
*Weekly Question*

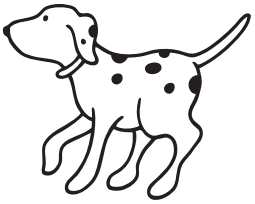
# Can a rock grow?

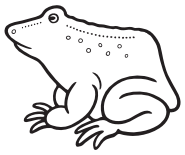
Only **living** things can grow.
An animal is a living thing.
A plant is a living thing.
Living things grow and change.



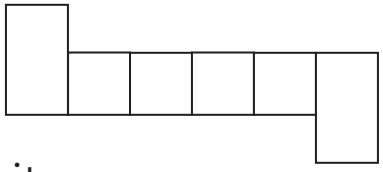
**1.** What does each living thing grow into? Draw lines to match.





**2.** Complete the sentence. Write the word.

A  thing changes as it grows.

**Vocabulary**

**living**
*having life*

Name _____

Day 3

*Weekly Question*

# Can a rock grow?

Daily Science Big Idea 1

WEEK 1

Living things need food, water, and air. These help living things **survive**. Food, water, and air also help living things grow and change.

**Vocabulary**

**survive**
*to stay living*

**1.** Complete the sentence. Write the word.

Living things need **food**, **water**,

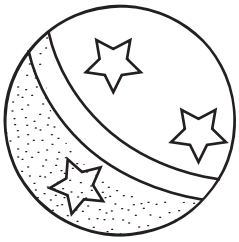
and **air** to ☐☐☐☐☐☐☐.

**2.** Read each sentence. Circle **yes** or **no**.

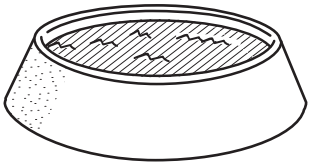
| | | |
|---|---|---|
| A cat needs food to survive. | yes | no |
| A tree needs air to survive. | yes | no |
| A baby needs toys to survive. | yes | no |

**3.** Color the things a dog needs to survive.


food



ball



water

Name _____

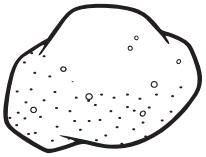
Daily Science
Big Idea 1
WEEK 1

**Day 4**

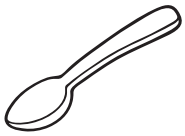
***Weekly Question***

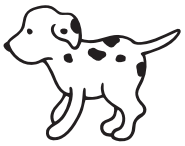
# Can a rock grow?

A rock is **nonliving**. It does not grow and change. It does not need food, water, or air.



**1.** Put an **X** on the nonliving things.



**2.** How are all nonliving things alike?
Fill in the bubble next to the correct answer.

Ⓐ They don't need food, water, or air.

Ⓑ They move and breathe.

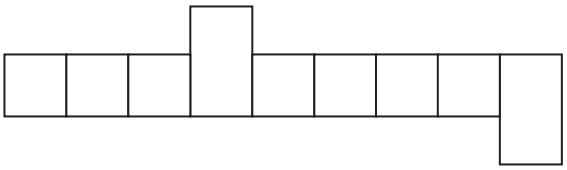
Ⓒ They grow and change.

**3.** List four nonliving things in your classroom.

_____ _____

_____ _____

**4.** Complete the sentence. Write the word.

A rock is  .

**Vocabulary**

**nonliving**
*not having life*

Name _____

Daily Science
Big Idea 1
WEEK 1

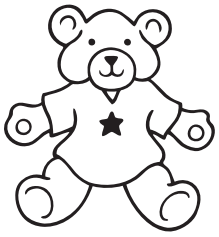
**Day 5**

***Weekly Question***

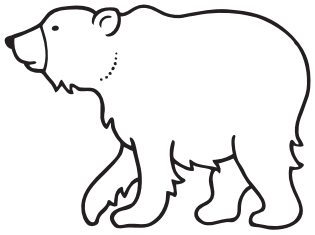
# Can a rock grow?

**1.** Color the picture of a living thing.

Teddy Bear



Big Bear



**2.** Look at the bears again. Circle **yes** or **no**.

| | | |
|---|---|---|
| Teddy Bear grows. | yes | no |
| Big Bear is living. | yes | no |
| Big Bear eats. | yes | no |

**3.** Complete the sentences. Use the words in the box.

**living** **nonliving** **survive**

A rock is _____.

A butterfly is _____.

I need air, water, and food to _____.


*Living things have basic needs that help them stay alive.*

# Week 2

# Do monkeys really eat bananas?

There are over 250 different species of monkeys. Most types of monkeys eat fruit and leaves, though some monkeys eat insects, other plant parts, and even some rodents. Like every animal, the monkey's diet depends on where it lives. Monkeys that live in a place that grows bananas will eat bananas. But if a monkey doesn't live near a banana tree, it will find something else to eat. Monkeys are intelligent and willing to try new things, especially if their usual food cannot be found.

## Day One

**Vocabulary:** *energy*

Say: **All living things need food. Food gives us energy. We need energy to move, think, play, work, and stay alive.** Have students make a prediction. Ask: **Do you think monkeys eat bananas? Why?** (Yes. Bananas give monkeys energy.) Distribute page 15 and complete it with students.

## Day Two

**Materials:** pictures of food

Say: **People eat many kinds of food. Different foods give us energy. They are good for us.** Hold up each picture of food and have students raise their hands if they would eat the food in the picture. Distribute page 16 and have students complete the first item. For activity 2, make a list on the board of students' favorite foods. Have students copy a food word and draw its picture.

## Day Three

Say: **People eat food that is grown all over the world. But animals must eat food that grows where they live.** Ask: **Do bananas grow at the North Pole?** (no) **Does a cactus grow in the jungle?** (no) Distribute page 17 and read the introduction aloud. Then guide students through the first activity, helping them identify where each animal lives. For activity 2, read each sentence aloud and have students circle their answers.

## Day Four

Explain that animals eat food that they can find easily. Say: **Cows don't eat fruit because they can't climb trees. Monkeys don't eat rice because they can't grow it or pick it.** Distribute page 18. After students have completed the first activity, have them discuss their favorite foods in pairs or as a group.

## Day Five

Tell students they are going to review what they've learned about food. Have them complete page 19. Go over the answers together.

Name _____

Daily Science
Big Idea 1
WEEK 2

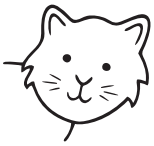
Day 1

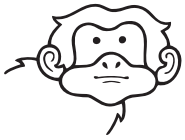
*Weekly Question*

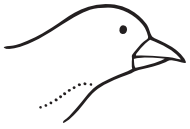
# Do monkeys really eat bananas?

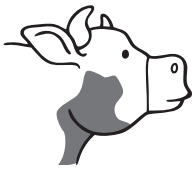
Living things eat food to get **energy**.

**1.** Draw a line from each animal to a food it eats for energy.









- bananas
- grass
- fish
- worms

**2.** Complete each sentence. Write the word.

Monkeys eat to get ☐☐☐☐☐☐.

We eat to get ☐☐☐☐☐☐.

**Vocabulary**

**energy**
*the power to do work*

Name _____

Daily Science

Big Idea 1

WEEK 2

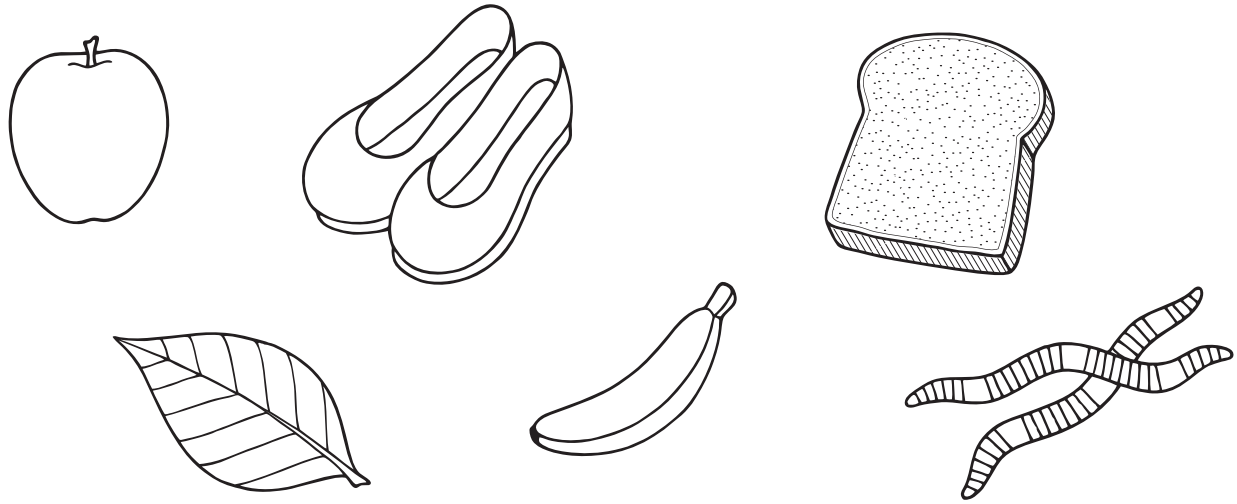
Day 2

*Weekly Question*

# Do monkeys really eat bananas?

People eat many kinds of food to get energy.

**1.** Circle the things people eat.



**2.** Draw a picture of what you eat to get energy. Then complete the sentence about it.

I eat _____ to get energy.

Name _____

Daily Science
Big Idea 1
WEEK 2

Day 3

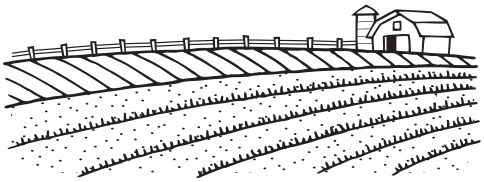
*Weekly Question*

# Do monkeys really eat bananas?

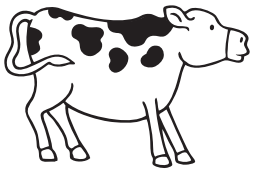
Animals need food to get energy. They eat food that grows where they live.

**1.** Draw lines to match the animals with where they get their food.

monkey



field



cow

South Pole

penguin

jungle

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A monkey eats fish. | yes | no |
| A penguin eats bananas. | yes | no |
| A cow eats grass. | yes | no |

Name _____

Daily Science

Big Idea 1

WEEK 2

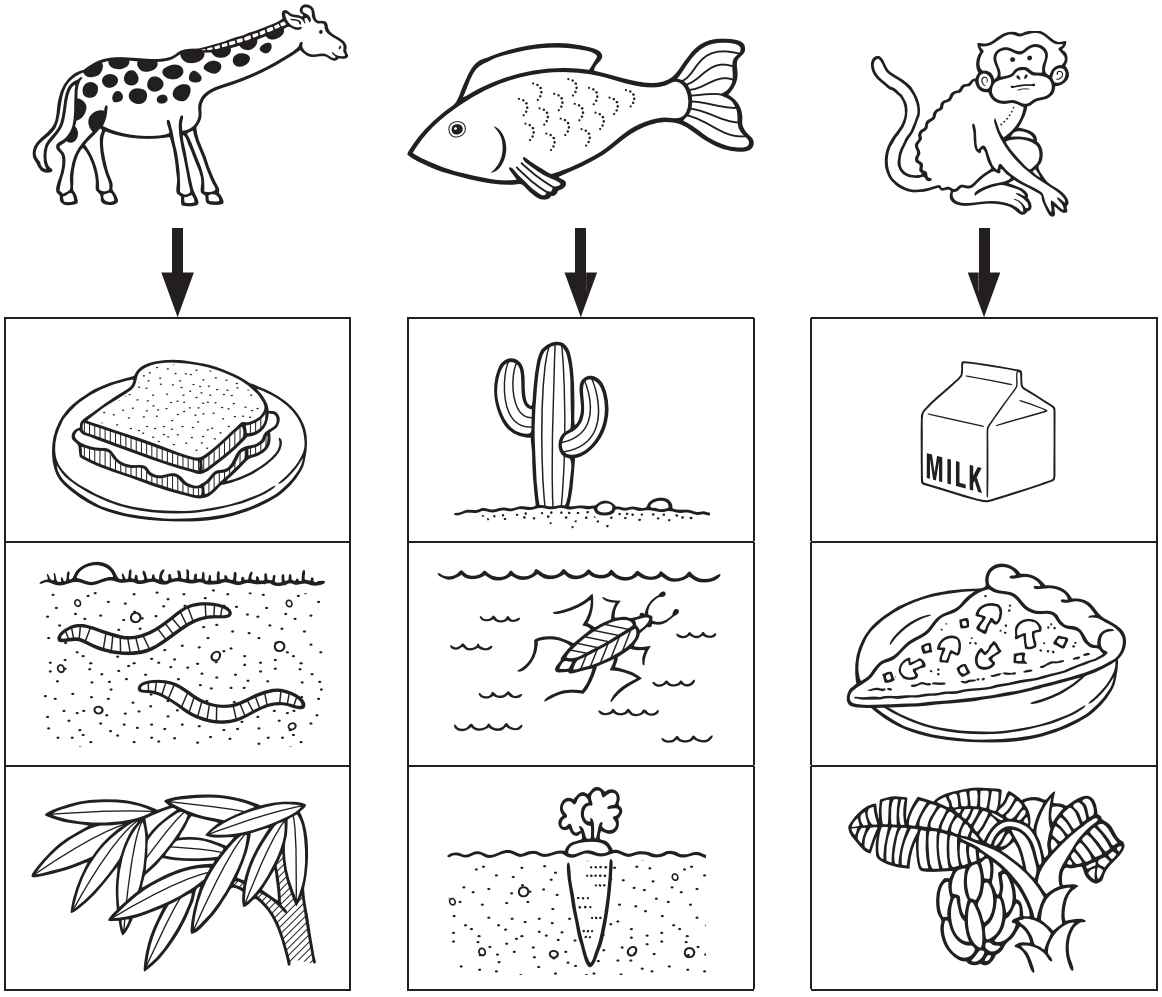
Day 4

*Weekly Question*

# Do monkeys really eat bananas?

Animals eat food that is easy to get.

Circle the food that is easy for each animal to get.




**Talk**

Discuss with your partner what you like to eat every day.

Name _____

Daily Science

Big Idea 1

WEEK 2

Day 5

*Weekly Question*

# Do monkeys really eat bananas?

**1.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Animals need food to live. | yes | no |
| Animals eat food that grows where they live. | yes | no |
| All animals can eat anything. | yes | no |
| People eat food to get energy. | yes | no |

**2.** Draw a picture of each thing.

| Something you eat | Something a monkey eats |
|---|---|
| | |

**3.** Read the question. Circle **yes** or **no**.

| | | |
|---|---|---|
| Do monkeys eat bananas? | yes | no |


*Living things have basic needs that help them stay alive.*

# Week 3

# Do plants have mouths?

Through the process of photosynthesis, plants make food by taking in light through their leaves. The leaves contain a chemical called chlorophyll, which is what makes the leaves green. Plants use their roots to bring in water that is full of nutrients from the soil. They absorb sunlight and carbon dioxide through their leaves. The leaves use the water and nutrients from the roots, along with the sunlight and carbon dioxide, to make the special sugar that the plant uses for energy. Although students will not learn all of these scientific terms, they will begin to gain an understanding of how plants make food.

## Day One

**Materials:** a plant or picture of a plant

Ask: **What do people eat?** Hold up the plant or picture of a plant. Have students make a prediction by asking: **What do you think this plant eats?** Allow volunteers to make their prediction. Distribute page 21 and read the introduction aloud. For the first activity, ask: **Does a plant need light?** (yes) Say: **Circle the picture of the sun. Does a plant need a house?** (no) Say: **Don't circle that picture.** When students have finished, help them complete activity 2.

## Day Two

**Vocabulary:** *leaf, roots, stem*

Tell students that plants need certain things to make food. Say: **Food for plants is different from food for people. Plants make their own food with special parts. I wonder what those parts are.** Distribute page 22 and read the introduction aloud. When students have finished the first activity, distribute crayons and read the directions for the second activity.

## Day Three

Distribute page 23 and read the introduction aloud. Point out the parts of the plant. Say: **Plants make food with their leaves and roots.** For the first activity, read each sentence aloud and have students write the words. For the second activity, read each sentence aloud and have students circle their answers.

## Day Four

Distribute page 24. Say: **The stem helps the plant grow tall. Leaves and roots connect to the stem.** Then read aloud the introduction. Distribute crayons and guide students through the first activity. Then have students complete the second activity on their own.

## Day Five

Tell students they are going to review everything they've learned about how plants get food and water. Help them complete page 25. Go over the answers together.

Name _____

Daily Science
Big Idea 1
WEEK 3

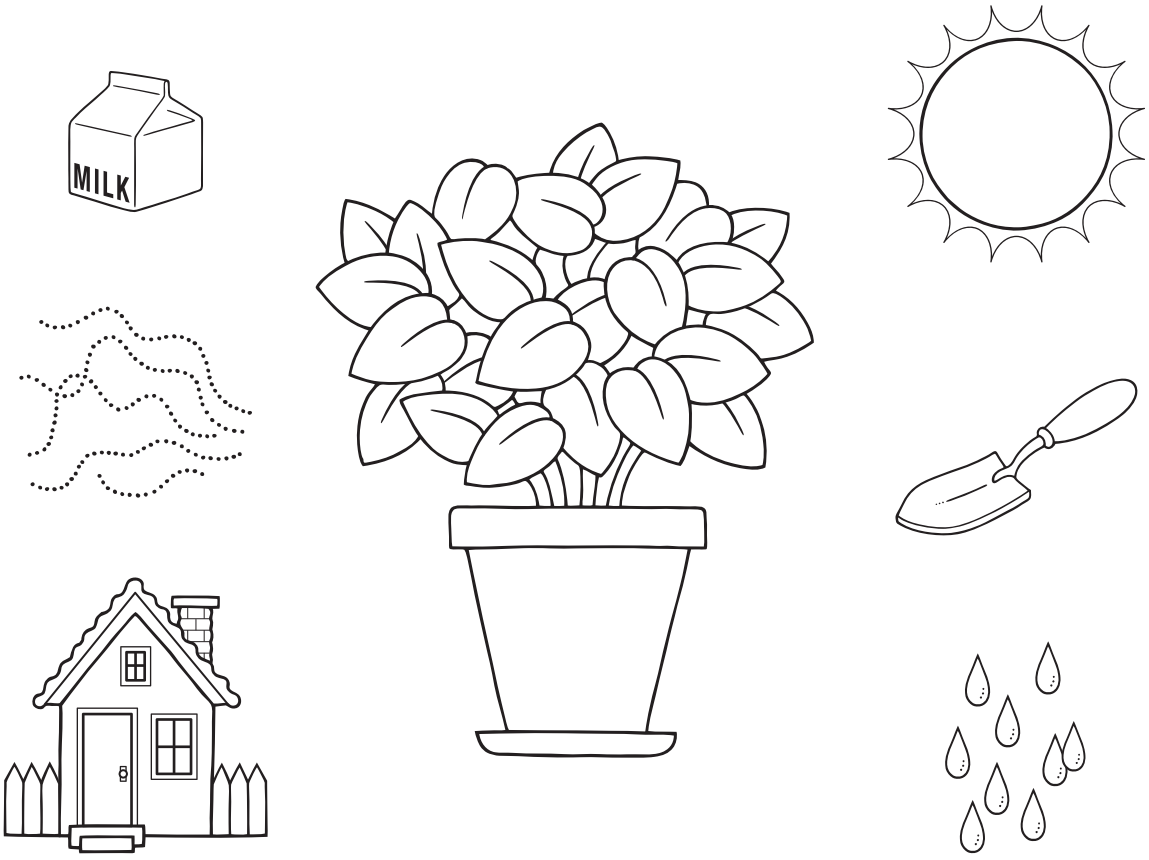
Day 1

*Weekly Question*

# Do plants have mouths?

Plants make their own food. They need air, light, and water to make food.

**1.** Draw lines from the plant to the things it needs to make food.




**2.** Complete the sentence. Write the word.

A plant uses air, light, and water to make _____.

Name _____

Daily Science
Big Idea 1
WEEK 3

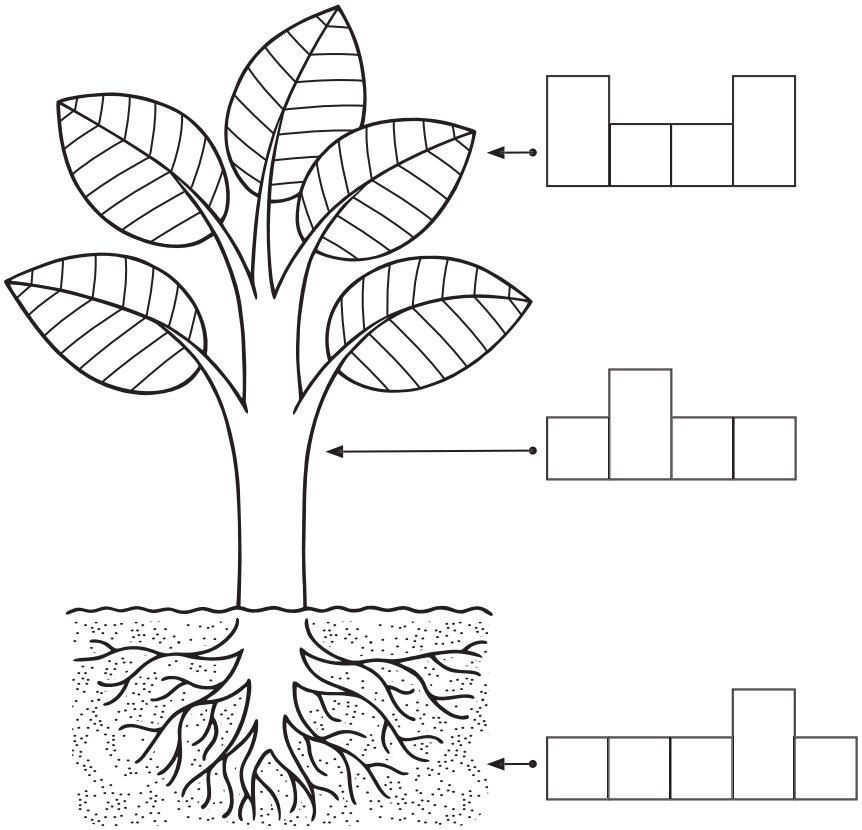
**Day 2**

***Weekly Question***

# Do plants have mouths?

Plants have different parts. They have **leaves**, **roots**, and **stems**. The parts have jobs to do. They help the plant make food.

1. Name the parts of the plant. Write the words.



2. Color the plant above.
   Color the leaves and stem green.
   Color the roots brown.

**Vocabulary**

**leaf**
*the part of a plant that gets sunlight and makes food*

**roots**
*the parts of a plant under the ground that get water*

**stem**
*the main part of a plant that moves and stores food and water*

Name _____

Daily Science
Big Idea 1
WEEK 3

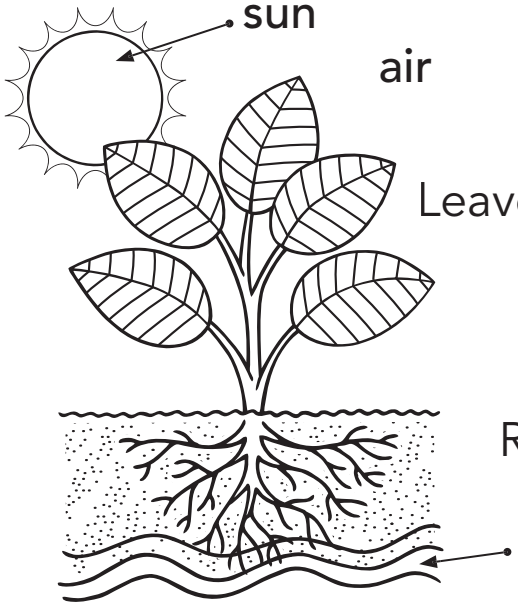
Day 3

*Weekly Question*

# Do plants have mouths?

Plants do not have mouths. But plants eat.
Plants use their leaves to make food.
Plants use their roots to get water.

**1.** Look at the picture. Complete each sentence.




Leaves get the ☐☐☐ and ☐☐☐.

Roots get the ☐☐▯☐☐.

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A leaf gets water. | yes | no |
| A leaf gets sun. | yes | no |
| Roots get water. | yes | no |

Name _____

Daily Science
Big Idea 1
WEEK 3

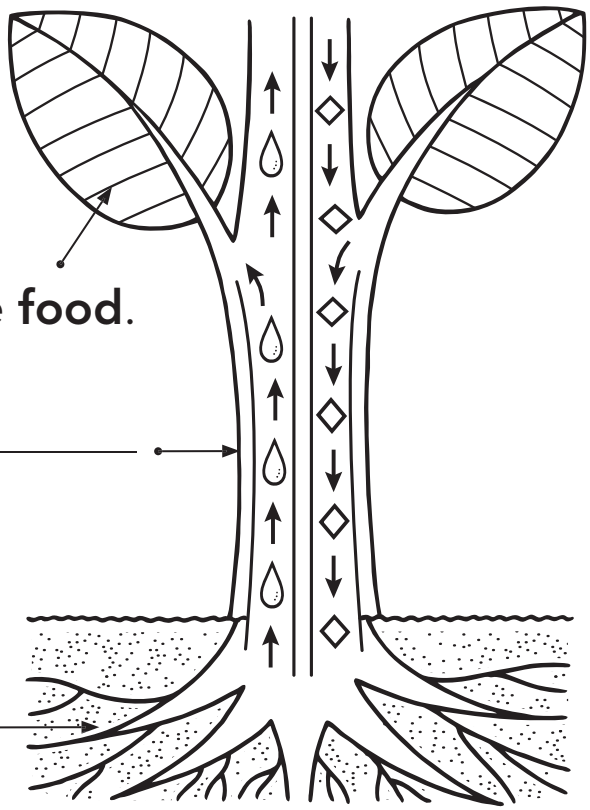
**Day 4**

***Weekly Question***

# Do plants have mouths?

Plants use their stems to move food and water.
Water moves from the roots up the stem.
Food moves from the leaves down the stem.

**1.** Color the food blocks green.
Color the water drops blue.
Complete the sentence.



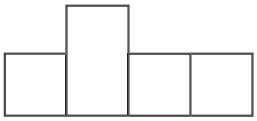
Leaves make **food**.

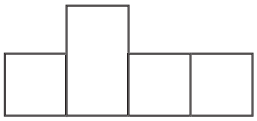
Stems move the _____

and the _____.

Roots get **water**.

**2.** Complete each sentence. Write the word **stem**.

Water goes up the  .

Food goes down the  .

Name _____

Daily Science

Big Idea 1

WEEK 3

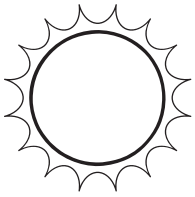
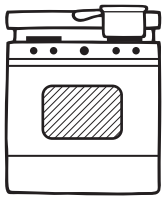
Day 5

*Weekly Question*

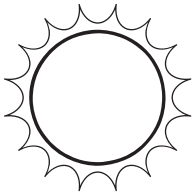
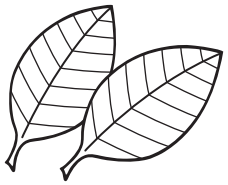
# Do plants have mouths?

Circle the answers.

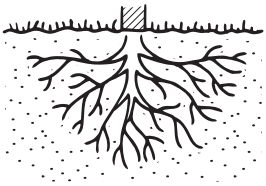
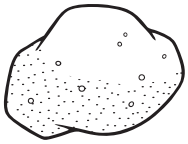
**1.** What do plants need to make food?

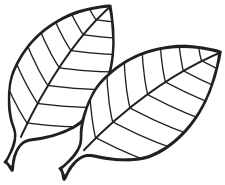

**2.** What part of the plant makes food?

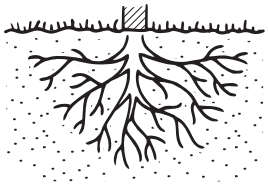




**3.** What part of the plant gets water?

**4.** What part of the plant moves the food and water?





**5.** Do plants have mouths? yes no


*Living things have basic needs that help them stay alive.*

# Week 4

# Do fish drink water?

All animals, including fish, need water to survive. Students will learn that most freshwater fish absorb water through their gills, while most saltwater fish will drink water and filter out the salt with their gills.

Fish use water to balance the salt content in their bodies. Generally, freshwater fish try to get rid of water because it dilutes the salt content in their bodies. Saltwater fish conserve water to prevent salt from building up too much. Salmon, which live in both fresh water and the ocean, absorb water while in rivers and lakes and drink water while in the ocean.

## Day One

Say: **All living things need water. And some living things *live* in water. What lives in the water?** Brainstorm some things that live in water. (fish, frogs, plants, and so on) Distribute crayons and page 27. Then guide students through the first activity by pointing to different things in the picture and asking: **Does this need water?** Have students complete the second activity.

## Day Two

**Vocabulary:** *fresh water, salt water*

Brainstorm different bodies of water. (lake, river, pond, ocean, and so on) Say: **Fish live in all these places. I wonder how these places are different from each other.** Distribute page 28 and read the introduction aloud. Read aloud the sentences in the first activity and have students write the words. For the discussion activity, pair students or discuss the answers as a class.

## Day Three

**Vocabulary:** *gills*

Distribute page 29. Point out the gills on the fish in the picture. Say: **All fish have gills. Fish use their gills to breathe.** Then read the introduction. Distribute crayons and guide students through the activities.

## Day Four

**Vocabulary:** *mouth*

Say: **Fish that live in fresh water get water with their gills. I wonder how fish that live in salt water get water.** Distribute page 30. Read the introduction aloud. Then guide students through the first activity and have them complete the second activity on their own.

## Day Five

Tell students they are going to review everything they've learned about animals needing water. Distribute crayons and have them complete page 31. Go over the answers together.

Name _____

Daily Science
Big Idea 1
WEEK 4

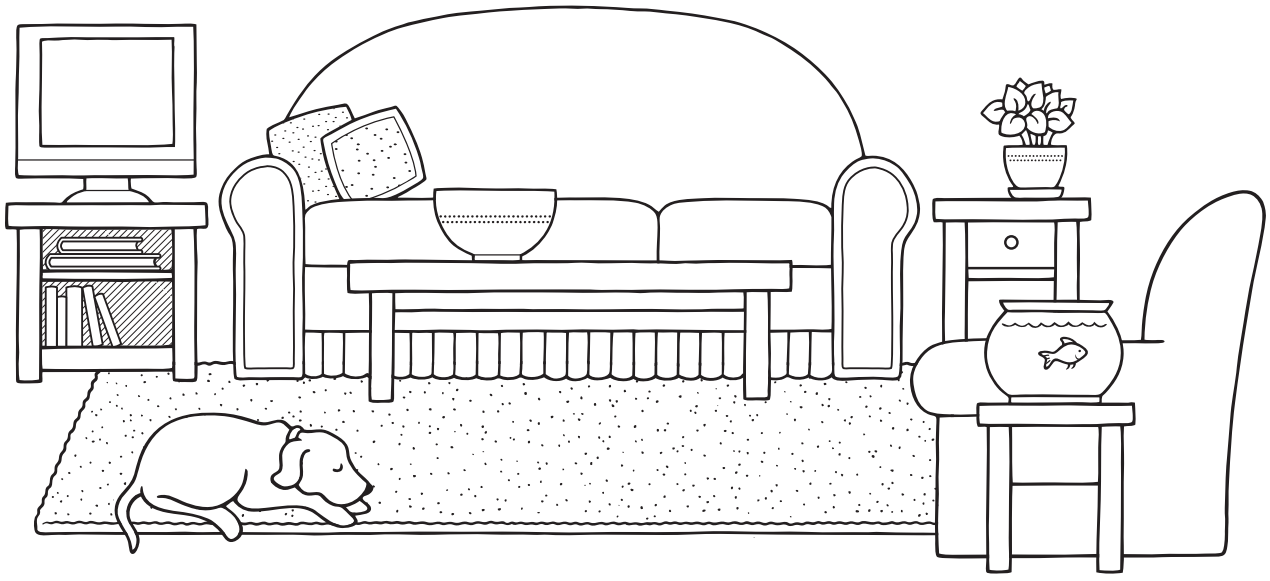
Day 1

*Weekly Question*

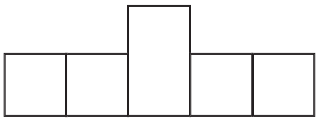
# Do fish drink water?

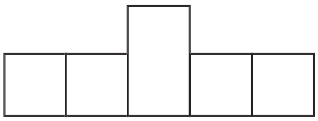
All living things need water.

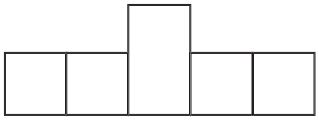
**1.** Circle the things that need water. Color the picture.



**2.** What do all these things need? Write the word.

The dog needs  .

The fish needs  .

The plant needs  .

Name _____

Daily Science
Big Idea 1
WEEK 4

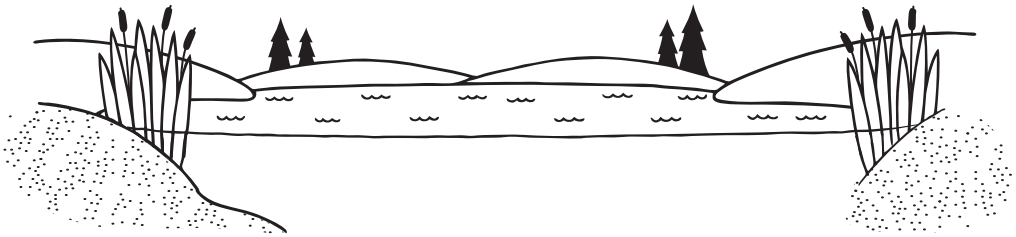
Day 2

*Weekly Question*

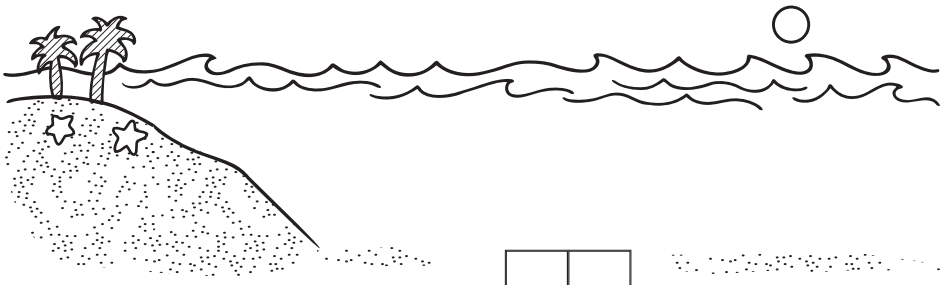
# Do fish drink water?

Some fish live in **fresh water**. A lake and a river are fresh water. Some fish live in **salt water**. The ocean is salt water.

Draw a fish in each picture. Then write the word to complete each sentence.



A lake and a river are ☐☐☐☐☐ water.



An ocean is ☐☐☐☐ water.

**Talk**

What bodies of water are near you? Are they fresh water or salt water? Talk about it with your partner.

**Vocabulary**

**fresh water**
*water without a lot of salt; lakes and rivers are fresh water*

**salt water**
*water with a lot of salt; oceans are salt water*

Name _____

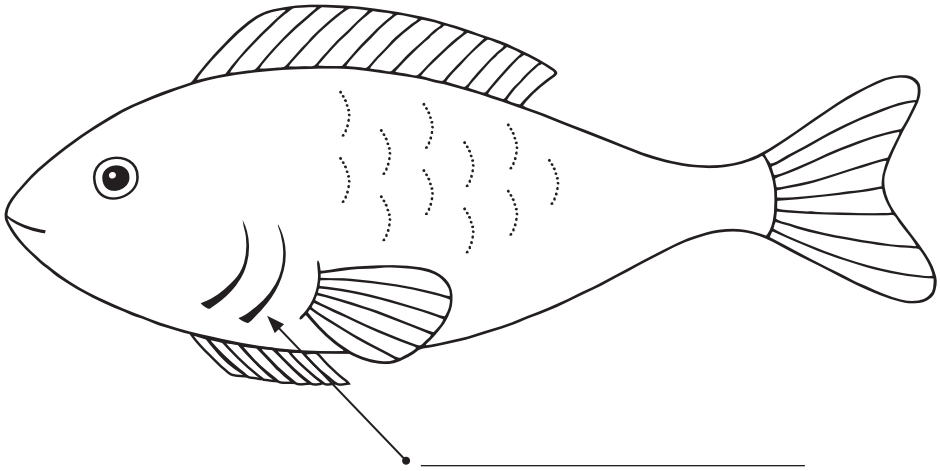
Day 3

*Weekly Question*

# Do fish drink water?

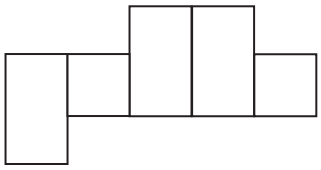
All fish have **gills**. Fish that live in fresh water use their gills to get water.

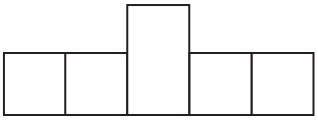
**1.** What does a fish use to get water? Write the word. Color the fish.



_____

**2.** Complete the sentences. Write the words.

A fish has  .

The  goes into the gills.

Daily Science

Big Idea 1

WEEK 4

**Vocabulary**

**gills**
*the parts of a fish that help it breathe*

Name _____

Daily Science
Big Idea 1
WEEK 4

**Day 4**

***Weekly Question***

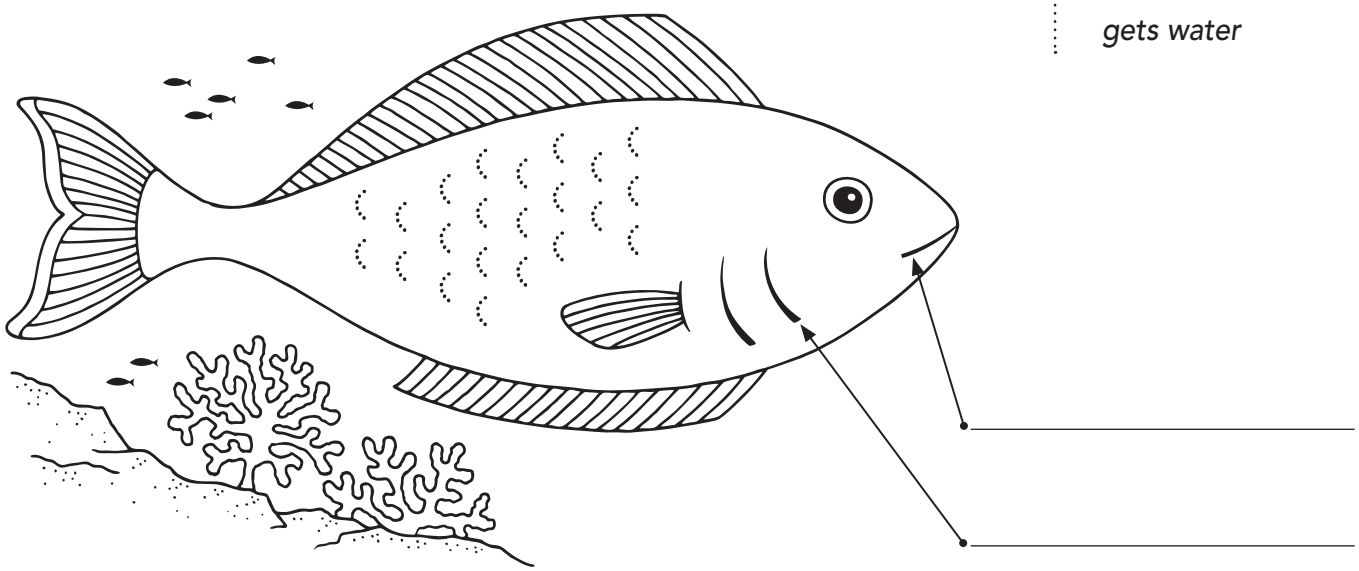
# Do fish drink water?

Fish that live in salt water drink with their **mouths**. The water has lots of salt. The salt goes out the fish's gills.

**Vocabulary**

**mouth**
*the part of a saltwater fish that gets water*

**1.** Write the parts of the fish.



**2.** Complete the sentences. Write the words.

Water goes into the fish's _____.

The salt comes out of the _____.

Name _____

Daily Science
Big Idea 1
WEEK 4

Day 5

*Weekly Question*

# Do fish drink water?

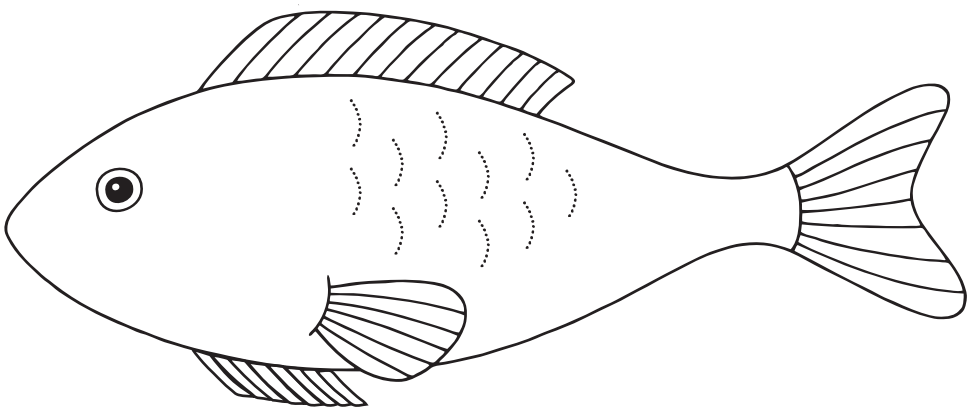
**1.** What do all living things need? Circle the word.

gills water mouth

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Fish live in water. | yes | no |
| Fish use gills to eat. | yes | no |
| A river has salt water. | yes | no |
| The ocean has salt water. | yes | no |

**3.** Draw the mouth and gills. Then color the fish.



**4.** Read each question. Circle **yes** or **no**.

| | | |
|---|---|---|
| Do fish in fresh water drink with their mouths? | yes | no |
| Do fish in salt water drink with their mouths? | yes | no |

Name _____

Unit Review

*Comprehension*

# Needs of Living Things

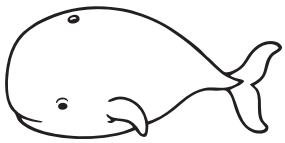
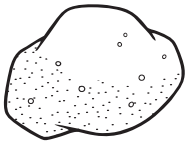
Daily Science

Big Idea 1

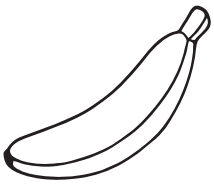
WEEK 5

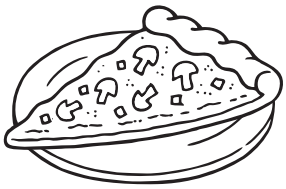
Read each question. Circle the answer.

**1.** Which of these is living?

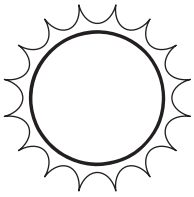




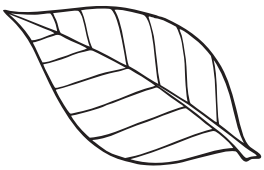
**2.** What does a monkey eat?



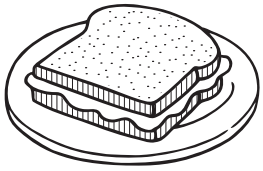
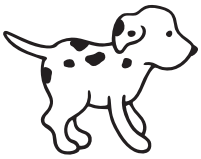
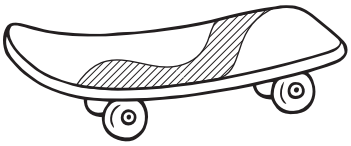


**3.** What plant part makes food?





**4.** Which of these will grow?

Name _____

Unit Review

*Vocabulary*

# Find a Word


Read each riddle. Circle the correct word.

| | | | |
|---|---|---|---|
| **1.** | I am very big.<br>I am full of salty water. | lake | ocean |
| **2.** | We are part of a plant.<br>We help the plant make food. | leaves | roots |
| **3.** | I am part of a fish.<br>I help the fish get water. | river | gills |
| **4.** | I help you do work.<br>You get me from food. | stem | energy |
| **5.** | I am not like you.<br>I describe a rock. | living | nonliving |
| **6.** | When I do this, I change.<br>I get bigger and taller. | grow | survive |

Name _____

Unit Review

*Visual Literacy*

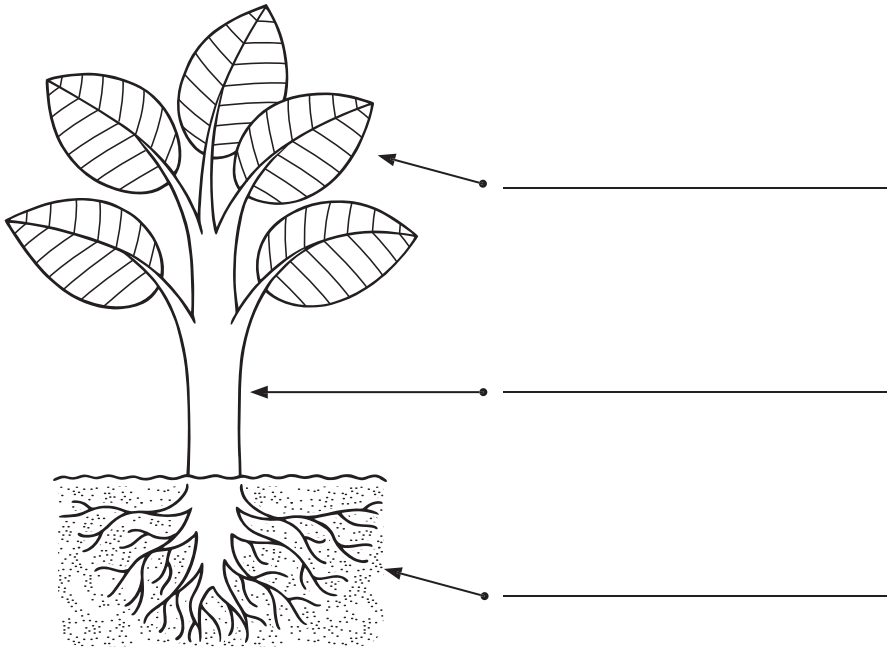
# Picture This!

Daily Science

Big Idea 1

WEEK 5

**1.** Use the words to write the parts of the plant.

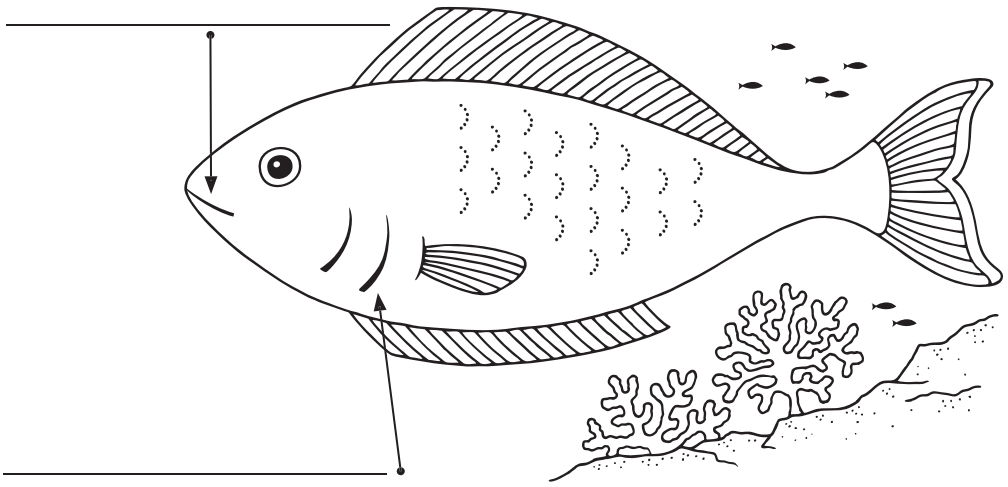


leaf

roots

stem

**2.** Use the words to write the parts of the fish.



mouth

gills

Name _____

Daily Science
Big Idea 1
WEEK 5

Unit Review

*Hands-on Activity*

# Watch a Plant Drink!

You can see how a plant drinks water. Try this test.

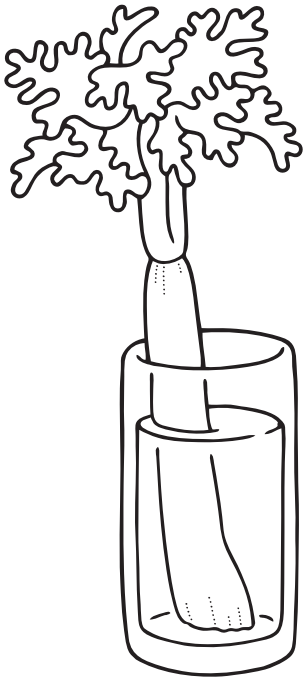
**What You Need**

- celery stalk with leaves
- red food coloring
- glass of water
- safety scissors
- crayons

1. Stir red food coloring into the water.
2. Have an adult help you cut the bottom off the celery stalk.
3. Put the celery in the colored water. Leave it alone for a whole day.
4. Check to see what happened!

## What Did You Discover?

Color the celery to show what happened.



**Talk**

Tell your partner what happened to the celery.


# Plants and animals live in many different places.

**Key Concepts**
Habitat and Survival

**National Standard**
The world has many different environments, and distinct environments support the life of different organisms.

As students learn more about what living things need to survive, they begin to explore how living things survive together. Students in the first grade use their senses and observations about the world around them to understand the basic properties of different environments. This Big Idea introduces students to:

- habitats as a home for plants and animals;
- different types of habitats, such as deserts, bodies of water, and forests;
- the things animals and plants do to survive in their habitats; and
- why certain plants and animals must live in a specific habitat.

## Teacher Background

An ecosystem is a community of living things that survive best in specific regions. Ecosystems are classified by climate, geography, average temperature, and average amount of water present. Common ecosystems include rainforests, deserts, tundras, coral reefs, forests, savannas, marshes, and human ecosystems.

The word *habitat* is often used interchangeably with the word *ecosystem*. However, a habitat refers to the environment of a particular species. For example, a rainforest is an ecosystem, but it is the habitat of the poison arrow frog.

**For specific background information on each week's concepts, refer to the notes on pp. 38, 44, 50, and 56.**

## Unit Overview

### WEEK 1: Where do animals sleep?

**Connection to the Big Idea:** Students learn that animals live in different places on Earth, and that these habitats are "homes" where animals eat and sleep. Students are introduced to different land and water environments and learn which animals live in each.

**Content Vocabulary:** *den, desert, forest, habitat, nest, ocean*

### WEEK 2: Why do camels have humps?

**Connection to the Big Idea:** Students learn that some living things survive in places with little rainfall. They discuss characteristics of a desert environment and learn about one animal—the camel—that lives in the desert. They learn that camels have body features to help them survive in their habitat.

**Content Vocabulary:** *camel, stores*

### WEEK 3: Can a whale live in a lake?

**Connection to the Big Idea:** Students learn how freshwater habitats (lakes) are different from saltwater habitats (oceans). By studying the specific example of a whale, students learn that animals living in salt water would not survive in fresh water because of the differences in the habitat and the lack of food that whales eat.

**Content Vocabulary:** *krill, lake, whale*

### WEEK 4: Why do trees have different kinds of leaves?

**Connection to the Big Idea:** Students learn that climate influences how plants grow in different habitats, and that different leaves have different properties. They learn that some trees keep their leaves all year, while other trees have leaves that turn colors in the fall and drop off in the winter.

**Content Vocabulary:** *evergreen, leaves*

### WEEK 5: Unit Review

You may choose to do these activities to review concepts of habitat and survival of plants and animals.

**p. 62: Comprehension** Students answer multiple-choice questions about key concepts in the unit.

**p. 63: Vocabulary** Students sort content vocabulary words into different lists.

**p. 64: Visual Literacy** Students search for different plants and animals living in a habitat.

**p. 65: Hands-on Activity** Students closely examine a leaf and answer questions about its physical properties. The instructions and materials are listed on the student page. Review these and gather the materials ahead of time.


# Week 1

# Where do animals sleep?

*Plants and animals live in many different places.*

This week, students discover that there are many different places that animals and plants live, both on land and in water. These homes are called habitats. Habitats are distinguished by the plant and animal life they contain. Scientists also use other characteristics—such as average temperature, average rain or snowfall, and elevation—to define a habitat. Students will learn about three of the most common habitats: forests, deserts, and oceans.

## Day One

**Vocabulary:** *habitat*

Tell students that they will learn about different animal homes. Distribute page 39. Point out the pictures of habitats on the page and read the introduction aloud. Briefly talk about the features of the habitats, such as deserts being hot and dry, forests having lots of plants and animals, and so on. Then help students complete the activities on the page.

## Day Two

**Vocabulary:** *den, forest, nest*

Distribute page 40 and read the introduction aloud. Have students name some plants and animals that live in a forest. (trees, birds, foxes, deer, and so on) After students complete the first activity, have volunteers name the circled animals and their homes. Then read aloud the sentences in activity 2 and have students write the words, referring back to the picture as needed.

## Day Three

**Vocabulary:** *desert*

Distribute page 41 and read the introduction aloud. Say: **Only a few animals and plants can live in the desert because there is very little food and water.** Have students complete activity 1. Then help students identify the animals they circled (owl, snake, coyote) and where each animal lives (nest, hole, den). Then guide students through activity 2. For the discussion activity, pair students or talk as a class. If students have difficulty recalling features of a forest, brainstorm a forest's features and help students compare it to a desert.

## Day Four

**Vocabulary:** *ocean*

Distribute page 42 and read the introduction aloud. Then say: **Ocean animals can even sleep underwater! Some sleep with their eyes open.** Brainstorm with students different animals that live in the ocean. (fish, crab, octopus, whale, coral, and so on) Explain that coral looks like a plant, but is actually an animal since it does not make its own food. Have students complete the first activity, looking for some of the animals they named. Read aloud each sentence in the second activity and have students circle their answers.

## Day Five

Briefly review the habitats you've discussed. Talk about how each habitat is important and has a variety of plants and animals. Then have students complete page 43. Go over the answers together.

Name _____

Daily Science
Big Idea 2
WEEK 1

**Day 1**

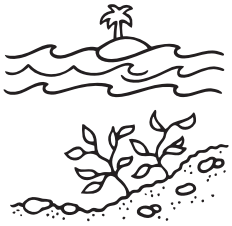
***Weekly Question***

# Where do animals sleep?

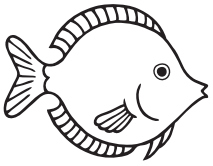
A **habitat** is the place where animals live, eat, and sleep. There are many kinds of habitats on Earth.

**1.** Match each animal to its habitat.

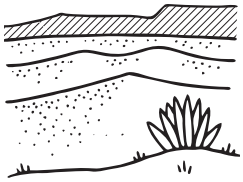
owl



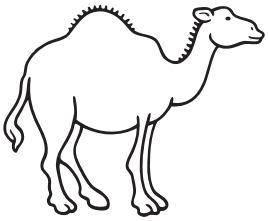
ocean



fish



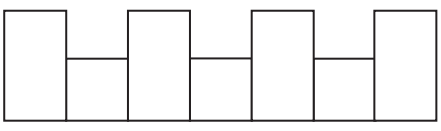
desert



camel

forest

**2.** Complete the sentence. Write the word.

All animals live in a  .

**Vocabulary**

**habitat**
*a place where plants and animals live*

Name _____

Day 2

*Weekly Question*

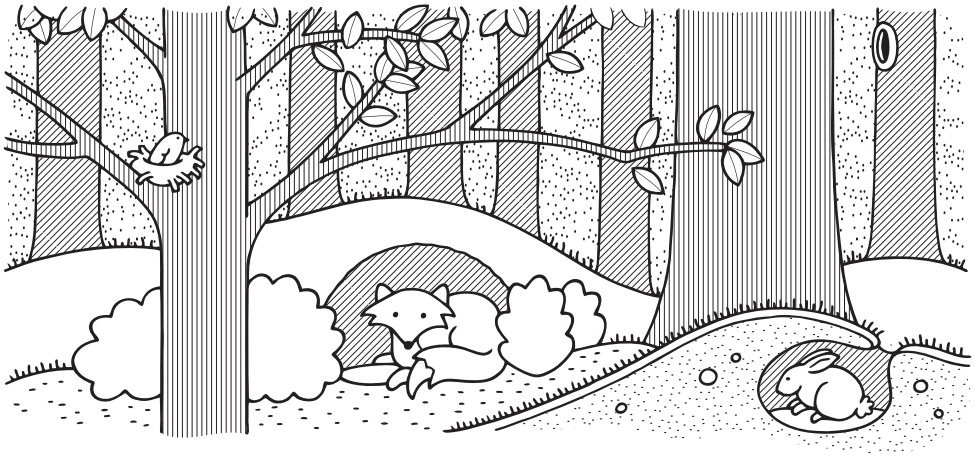
# Where do animals sleep?

Daily Science Big Idea 2

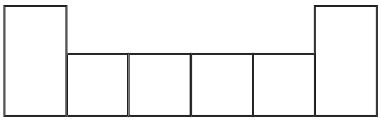
WEEK 1

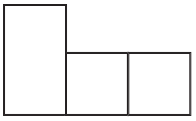
A **forest** is a habitat. A forest has many trees and plants. Many animals live in a forest. Some live in **nests**. Some live in **dens**. Some live in **holes**.

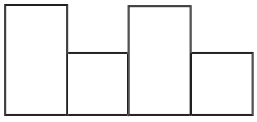
**1.** Find the forest animals. Circle them.

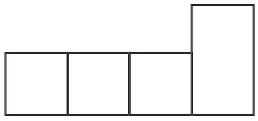


**2.** Use the picture to complete each sentence.

A  is a kind of habitat.

A fox lives in a  .

A rabbit lives in a  .

A bird lives in a  .

**Vocabulary**

**den**
*a home for wild animals*

**forest**
*a land full of many trees, plants, and animals*

**nest**
*a home for birds that is usually in a tree*

Name _____

Daily Science
Big Idea 2
WEEK 1

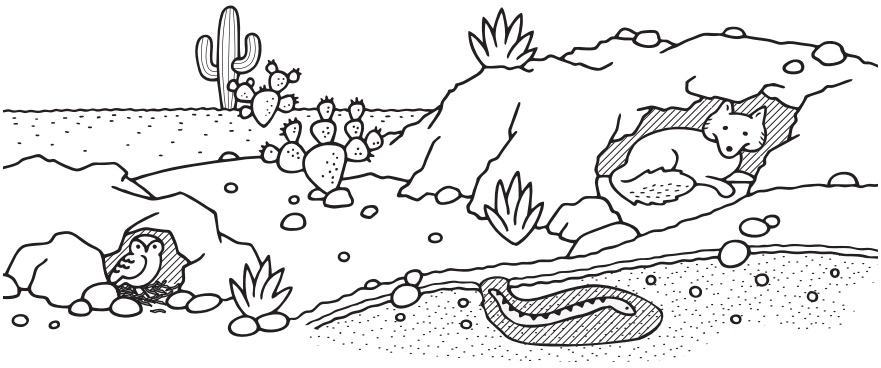
**Day 3**

***Weekly Question***

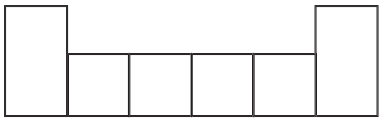
# Where do animals sleep?

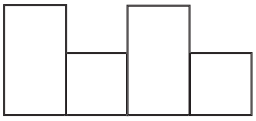
A **desert** is a habitat. Deserts are very dry. They are hot in the day and cold at night. Many animals live inside rocks or under the ground. It keeps them warm at night and cool during the day.

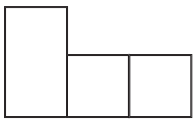
**1.** Find the desert animals. Circle them.



**2.** Complete the sentences. Write the words.

A  is a kind of habitat.

A snake lives in a  .

A coyote lives in a  .

**Talk**

Name one way a forest is different from a desert. Tell your partner.

**Vocabulary**

**desert**
*a dry place with few plants and animals*

Name _____

Daily Science
Big Idea 2
WEEK 1

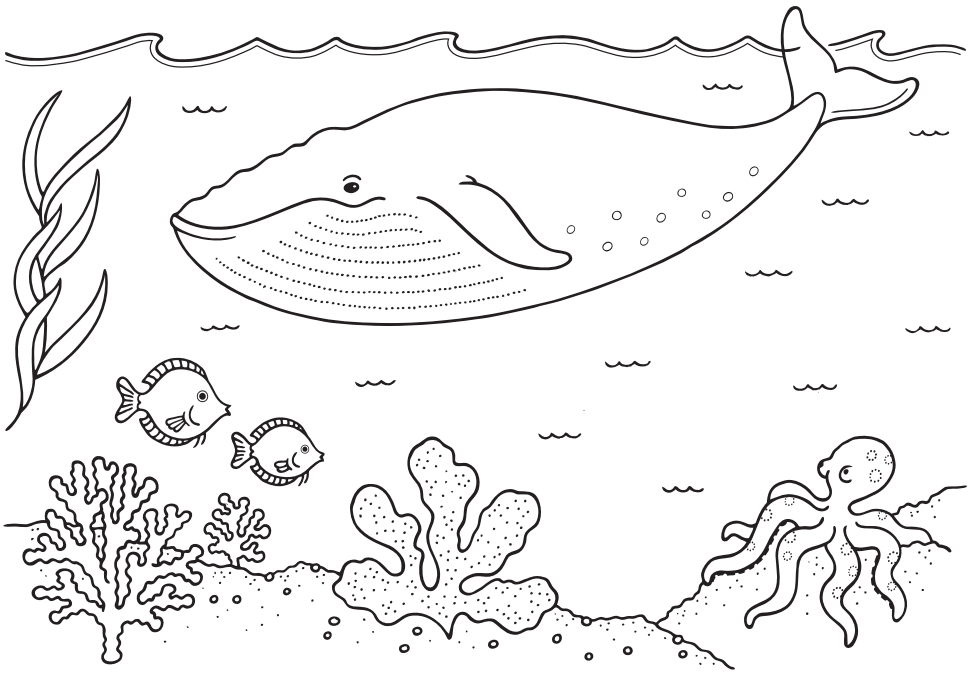
Day 4

*Weekly Question*

# Where do animals sleep?

An **ocean** is a big body of salty water. Many ocean animals live near plants or rocks under the water. Some animals live near the top of the water.

**1.** Find the ocean animals. Circle them.



**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A whale lives in the ocean. | yes | no |
| A camel lives in the ocean. | yes | no |
| An octopus lives in the ocean. | yes | no |

**Vocabulary**

**ocean**
*a large body of salt water that covers most of Earth*

Name _____

Daily Science Big Idea 2 WEEK 1

**Day 5**

***Weekly Question***

# Where do animals sleep?

**1.** Complete each sentence. Fill in the bubble next to the correct word.

A fox sleeps in a den in the _____.

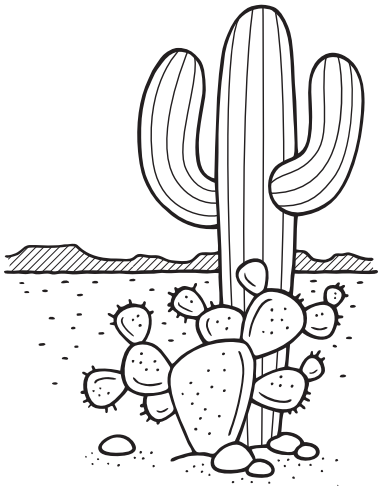
Ⓐ forest Ⓑ bedroom Ⓒ ocean

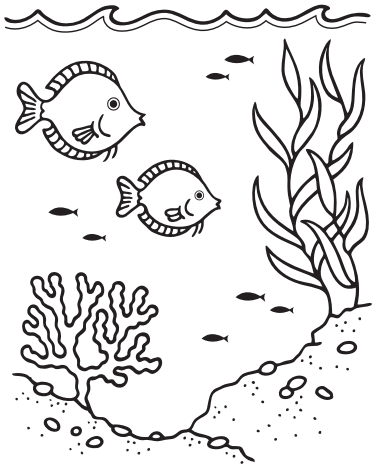
Only a few animals and plants live in the _____.

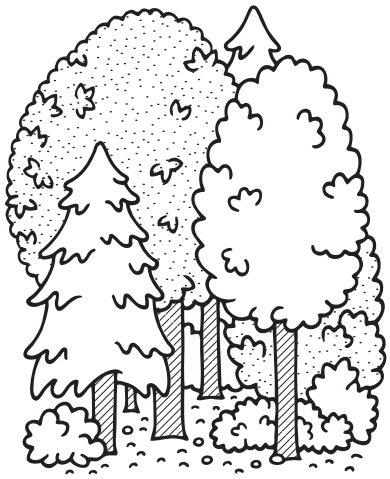
Ⓐ ocean Ⓑ desert Ⓒ forest

**2.** Write the name of each habitat. Use the words in the box.

**desert** **forest** **ocean**







_____ _____ _____


*Plants and animals live in many different places.*

# Week 2

# Why do camels have humps?

This week, students learn more about the desert habitat and the adaptations of some desert animals, such as camels. Deserts have little rainfall and extreme temperatures. Desert animals adapt to these conditions. Camels' humps are made from fatty tissue that helps them survive for long periods of time without food or water. Dromedary camels have one hump and are found in Africa and the Middle East. Bactrian camels have two humps, and they are found in Asia.

## Day One

**Vocabulary:** *camel*

Say: **Deserts are very dry. Without water, animals have a hard time living there. But some special animals can live in a desert.** Distribute page 45 and read aloud the introduction. Have students find the camel on the page and ask students what they know about camels. (They have humps, they are used to carry things, and so on.) Then help students complete the activities.

## Day Two

Distribute page 46 and read the introduction to students. Ask: **If food and water are hard to find, how do you think camels find it?** (They wander around looking for it.) Say: **Sometimes camels have to go a long way to find food and water. They must survive a long time without eating or drinking.** Have students complete the first two activities. Then discuss some things you would need for a trip to the desert. Pair students and have them complete the discussion activity.

## Day Three

**Vocabulary:** *stores*

Remind students that a habitat is a place where animals live. Then distribute page 47 and read the introduction to students. Say: **A camel has a hump because it lives in the desert. The desert is a hard habitat to live in because there is little food and water. The camel's hump stores food and water as fat.** Distribute crayons and have students complete the activities. Then have the group read the completed sentences aloud.

## Day Four

Distribute page 48 and read the introduction to students. Guide students through the first activity. For activity 2, read each sentence aloud and have students circle their answers.

## Day Five

Tell students they are going to review everything they've learned about camels and the desert. Have students complete page 49. Then go over the answers together.

Name _____

Daily Science
Big Idea 2
WEEK 2

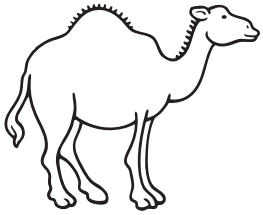
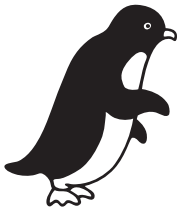
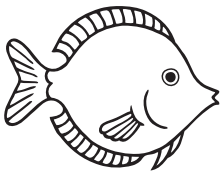
Day 1

*Weekly Question*

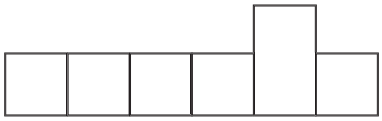
# Why do camels have humps?

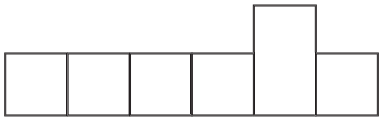
A **camel** lives in the **desert**. The desert is hot and dry. There is not much food or water.

**1.** Which animal lives in the desert? Circle the animal.

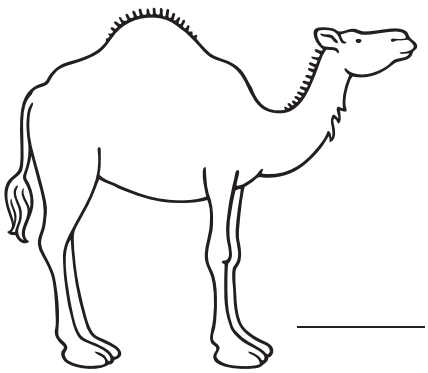




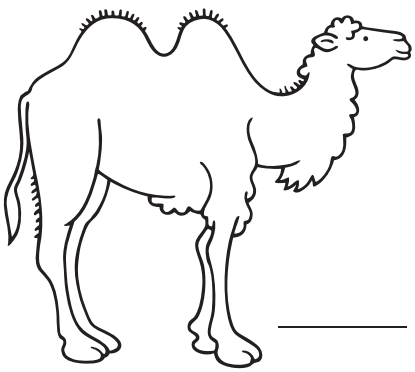
**2.** Complete each sentence. Write the word.

Some  have one hump.

Some  have two humps.

**3.** Write how many humps each camel has.


_____


_____

**Vocabulary**

**camel**
*a large animal that lives in the desert and has a hump*

Name _____

Daily Science
Big Idea 2
WEEK 2

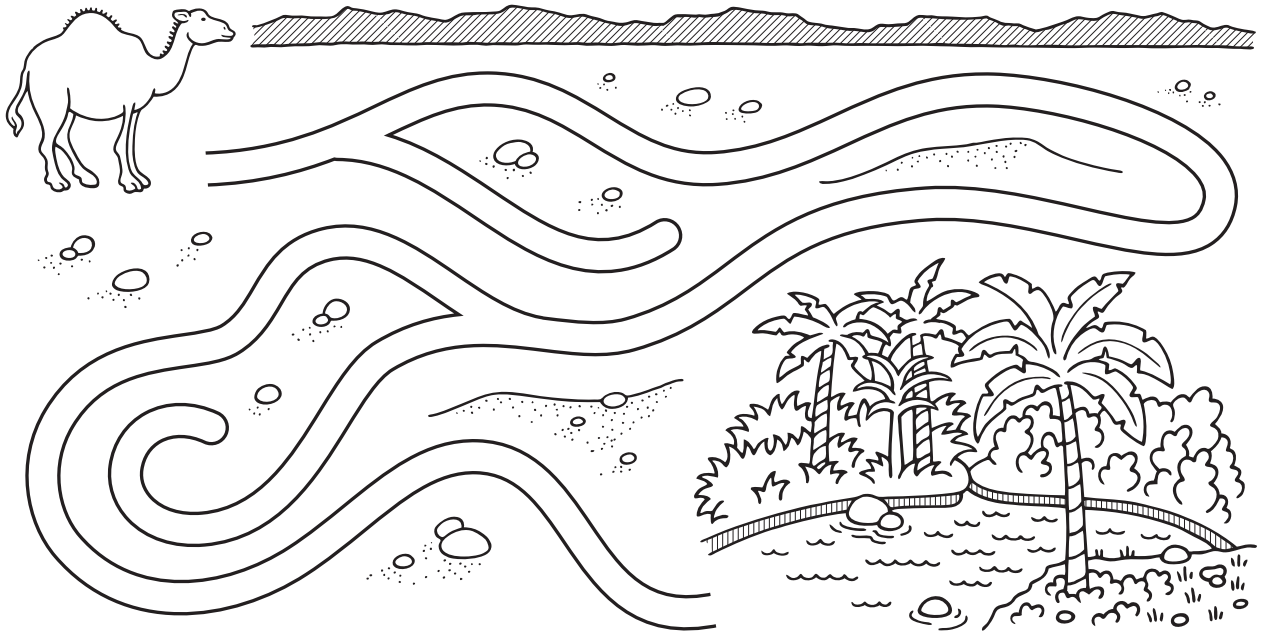
Day 2

*Weekly Question*

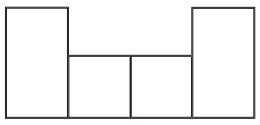
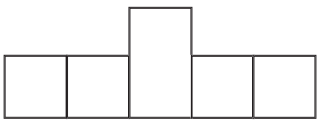
# Why do camels have humps?

It does not rain much in the desert. Few plants grow. Animals must look hard for food and water. Sometimes it is far away.

**1.** Help the camel find food and water. Draw a line.



**2.** Complete the sentence. Write the words.

A camel must look for  and  .

**Talk**

What would you take to the desert? Tell your partner.

Name _____

Day 3

*Weekly Question*

# Why do camels have humps?

Daily Science Big Idea 2

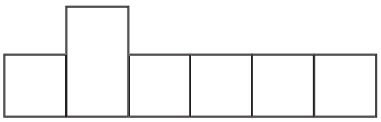
WEEK 2

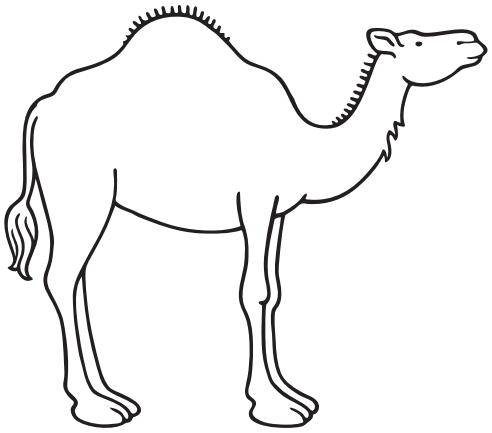
A camel **stores** fat in its hump. The fat helps the camel go without food for a long time.

**Vocabulary**

**stores**
*keeps or saves for later*

**1.** Write the word. Then color the camel.

The hump  fat.



**2.** Complete the sentences. Use the words in the box.

**desert** **hump** **stores**

A camel has a _____ made of fat.

Humps help camels live in the _____.

The hump _____ fat.

Name _____

Daily Science
Big Idea 2
WEEK 2

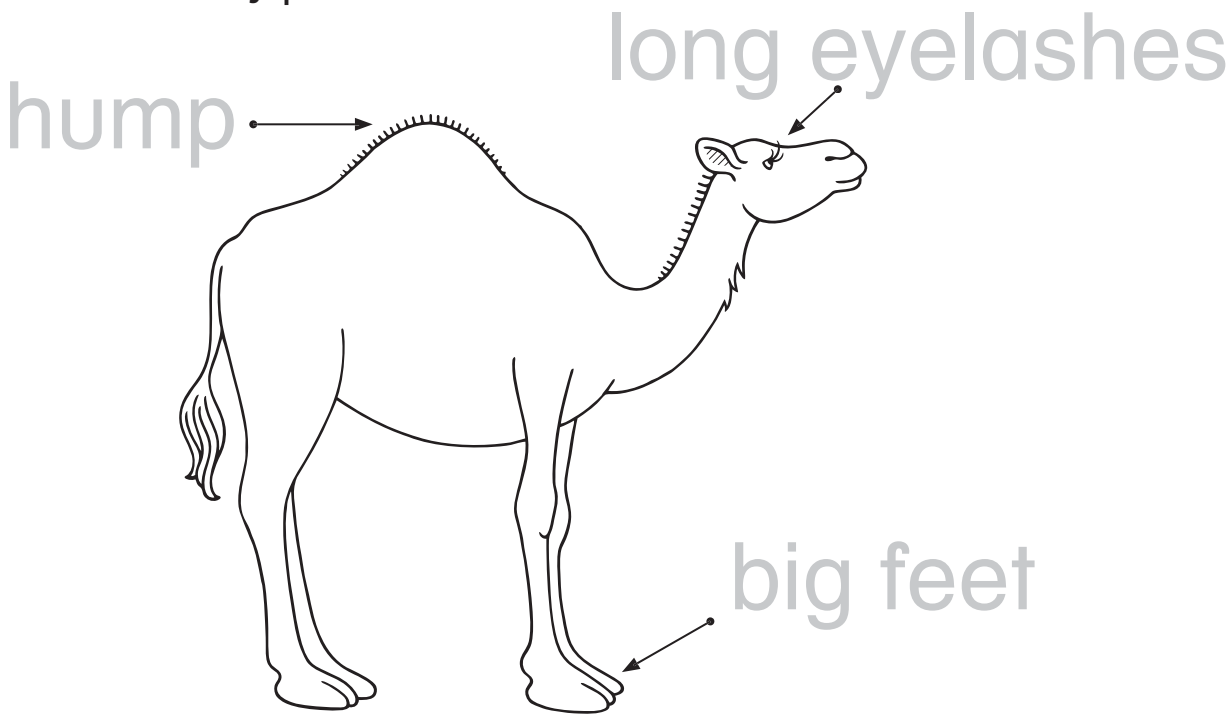
Day 4

*Weekly Question*

# Why do camels have humps?

A camel has other body parts that help it live in the desert. A camel has **big feet** to help it walk in sand. A camel has **long eyelashes** to keep sand out of its eyes.

**1.** Name the body parts. Trace the words.




**2.** Read about camels. Circle **yes** or **no**.

| | | |
|---|---|---|
| A camel's big feet help it swim. | yes | no |
| Long eyelashes keep sand out of its eyes. | yes | no |
| A camel's big feet help it walk in the sand. | yes | no |

Name _____

Daily Science
Big Idea 2
WEEK 2

Day 5

*Weekly Question*

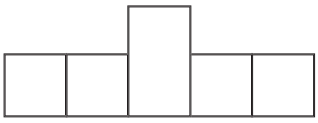
# Why do camels have humps?

**1.** Read the sentences. Circle **yes** or **no**.

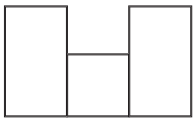
| | | |
|---|---|---|
| It rains a lot in the desert. | yes | no |
| Food is hard to find in the desert. | yes | no |
| A camel's hump helps it live in the desert. | yes | no |

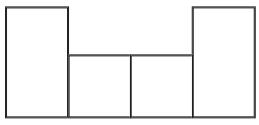
**2.** Complete the sentences. Use the words in the box.

**feet** **camel** **water** **fat**

It is hard to find  in the desert.

A  has long eyelashes.

A camel's hump is made of  .

A camel's big  help it walk in sand.


# Week 3

# Can a whale live in a lake?

*Plants and animals live in many different places.*

This week, students learn about the two types of water habitats: salt water and fresh water. The major saltwater habitat is the ocean, while freshwater habitats include rivers, lakes, ponds, and marshes.

While some species of whales have been known to visit lakes and rivers, all whales prefer to live in the ocean because of their size and because the food they eat is found there. Most whales eat krill and plankton, although some also eat fish and squid.

## Day One

**Vocabulary:** *whale*

**Materials:** world map or globe

Show students the map or globe, and point out the oceans. Say: **Water covers most of the Earth. Most of the water is in the oceans.** Distribute page 51 and read the introduction aloud. Point out the whale on the page and tell students some facts about whales. (biggest animal on Earth, breathes air, lives in every ocean) Then distribute crayons and guide students through the activities.

## Day Two

**Vocabulary:** *krill*

Distribute page 52 and read the introduction aloud. Say: **One reason a whale lives in the ocean is because the food it eats is in the ocean. Animals live in the habitat where they can find the right food.** After students complete the first activity, read the sentences in activity 2 aloud and have students circle their answers.

## Day Three

**Vocabulary:** *lake*

Distribute page 53 and read the introduction aloud. Ask students if they can describe any nearby lakes, and use the picture on the page to tell students more about a lake. (what lives in a lake, what you can do at a lake, and so on) Distribute crayons and have students complete the first activity independently. Then read aloud the sentences in the second activity and have students circle their answers.

## Day Four

Remind students that whales need a lot of space and a lot of food to survive. Ask: **Do you think a lake has enough space and food for a whale?** (no) Distribute page 54 and read the introduction. Then have students complete the first activity and share their drawings. For the discussion activity, you may want to draw a Venn diagram on the board and fill it in as a group before students talk in pairs.

## Day Five

Tell students they are going to review everything they've learned about whales, oceans, and lakes. Have students complete page 55. Then go over the answers together.

Name _____

Daily Science
Big Idea 2
WEEK 3

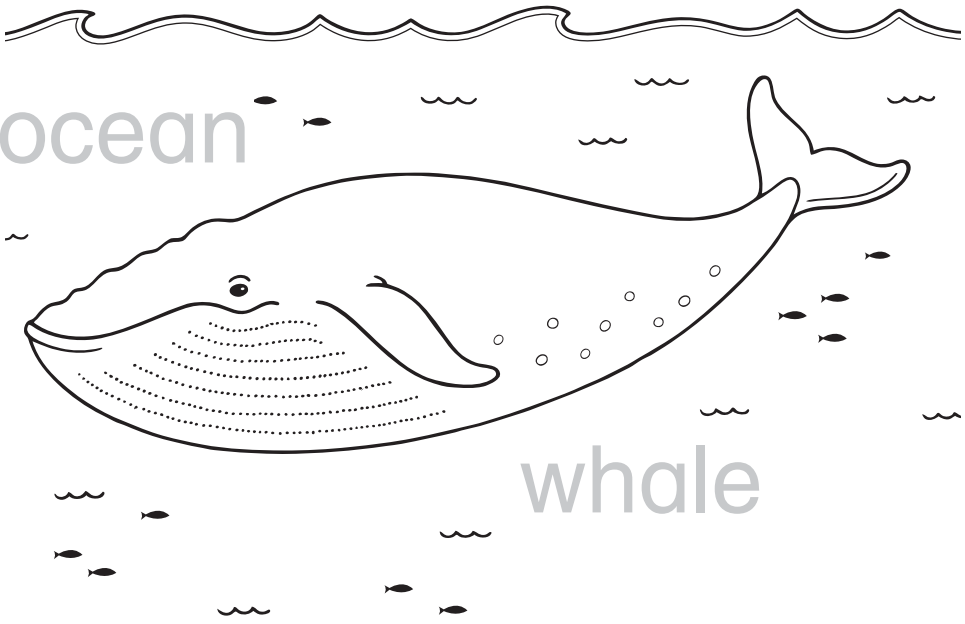
**Day 1**

***Weekly Question***

# Can a whale live in a lake?

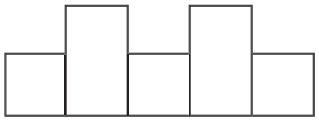
The **ocean** is very big. It is full of salty water. Lots of plants live in the ocean. Lots of animals live there, too. A **whale** lives in the ocean. A whale is very big.

**1.** Trace the words. Then color the picture.




**2.** Complete the sentences. Use the words from the picture.

Many things live in the ☐☐☐☐☐.

A  is very big.

**Vocabulary**

**whale**
*a large animal that lives in the ocean and breathes air*

Name _____

Daily Science
Big Idea 2
WEEK 3

Day 2

*Weekly Question*

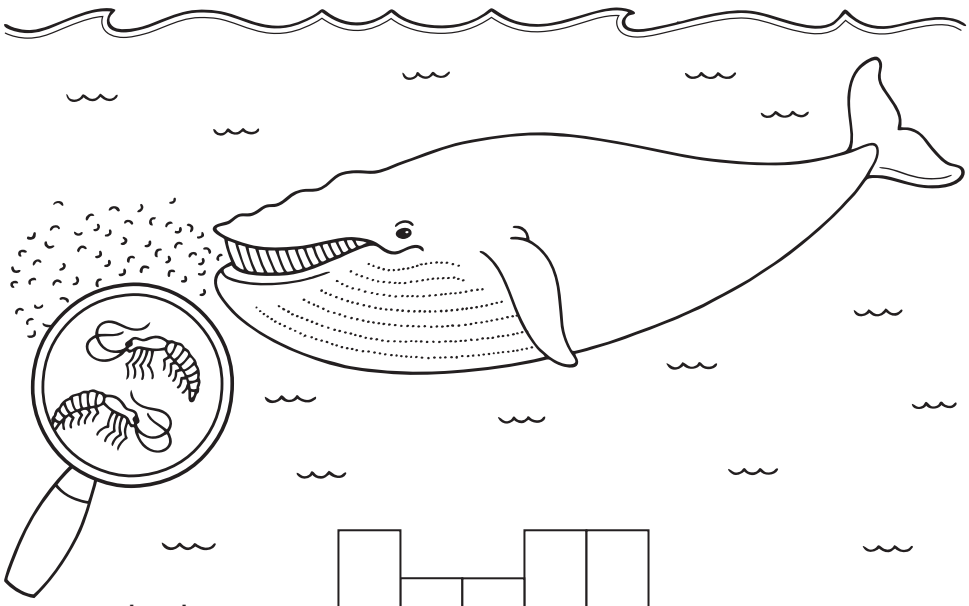
# Can a whale live in a lake?

A whale is the biggest animal in the ocean. Many whales eat **krill**. Krill are very small animals. They look like shrimp. Krill live in the ocean.

**Vocabulary**

**krill**
*a very small animal that looks like a shrimp*

**1.** What is the whale eating? Write the word.



Whales eat _____.

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Krill are bigger than whales. | yes | no |
| Whales eat krill. | yes | no |
| Whales and krill both live in water. | yes | no |
| Krill are a kind of plant. | yes | no |

Name _____

Daily Science
Big Idea 2
WEEK 3

Day 3

*Weekly Question*

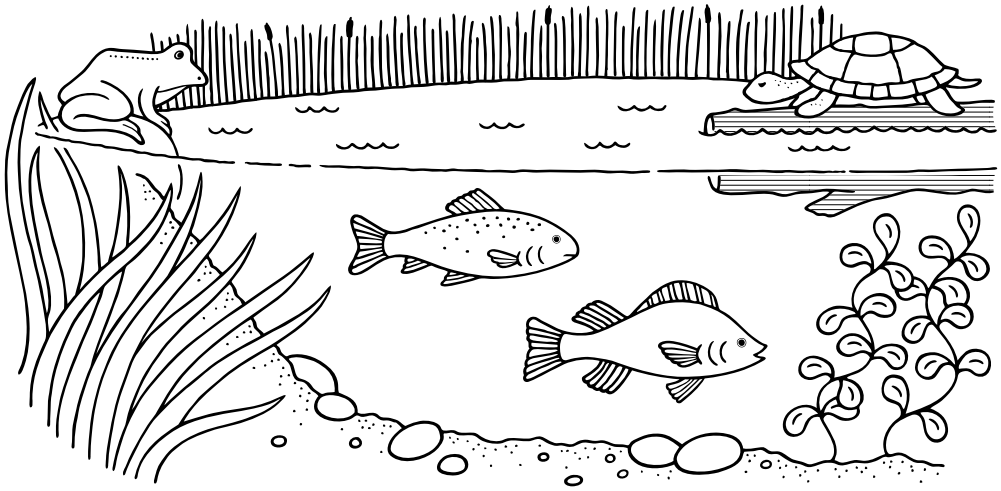
# Can a whale live in a lake?

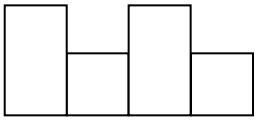
A **lake** is not like an ocean. A lake is much smaller than an ocean. The water in a lake is not salty. Plants and animals live in a lake. But they are different from the plants and the animals that live in an ocean.

**Vocabulary**

**lake**
*a body of fresh water that is smaller than an ocean*

**1.** Circle the animals in the lake. Complete the sentence. Then color the picture.



Many animals live in a  .

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Water in a lake is salty. | yes | no |
| A lake is smaller than an ocean. | yes | no |
| Only plants live in a lake. | yes | no |

Name _____

Daily Science
Big Idea 2
WEEK 3

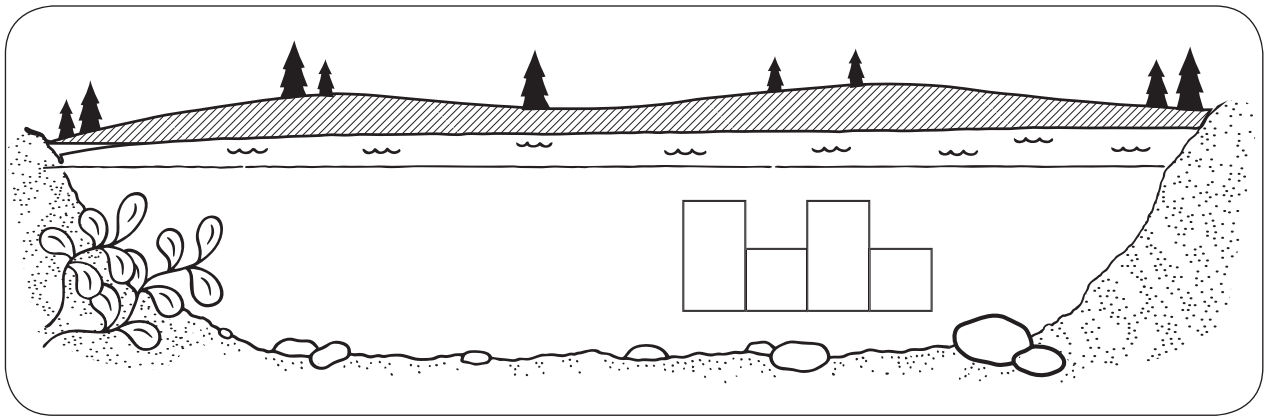
Day 4

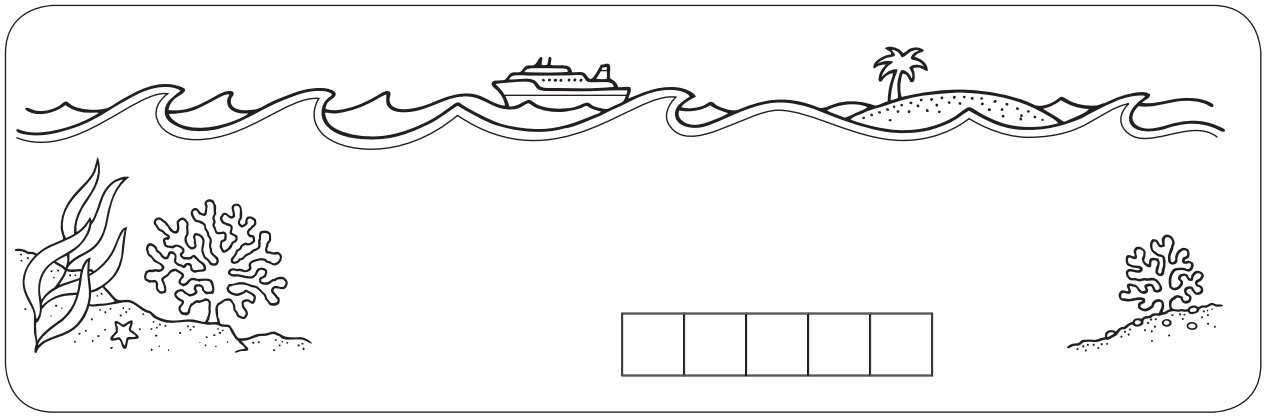
*Weekly Question*

# Can a whale live in a lake?

A whale cannot live in a **lake**. A lake is too small.
A lake does not have the right food for a whale.
A whale lives in the **ocean**.

Tell what each picture shows. Write **lake** or **ocean**.
Then draw a whale in the place where it lives.





**Talk**

How is a lake different from an ocean? How are they the same? Talk about it with a partner.

Name _____

Daily Science
Big Idea 2
WEEK 3

Day 5

*Weekly Question*

# Can a whale live in a lake?

**1.** Complete the sentences. Circle the correct words.

Whales live in the ____.

lake ocean river

The ocean has ____.

salt water fresh water

A lake is too small for a ____.

fish whale

**2.** Complete the sentences. Use the words in the box.

**krill** **lake** **whale**

A _____ is the biggest animal in the ocean.

Many whales eat _____.

A whale cannot live in a _____.


*Plants and animals live in many different places.*

# Week 4

# Why do trees have different kinds of leaves?

Students will learn that trees, like animals, adapt to their environment. The leaves on a tree match the climate where the tree is found. Temperate and tropical climates feature trees with broad leaves, such as poplar or maple. Cold climates often feature trees with thin, round needles, such as pine. Leaves help trees gather sunlight for photosynthesis, catch and direct rain to the roots, and store food and water. Broad leaves are best for capturing light, while thin, round leaves are best for storing food and water.

## Day One

**Vocabulary:** *leaves*

**Materials:** sample leaves from local trees (optional)

Distribute page 57 and read the introduction. If you brought leaves, pass them around or show them to students. Point to the leaf pictures on the page and read each name aloud. Have students complete the first activity. For the second activity, read the sentence aloud and have students write the word. For the discussion activity, pair students or discuss the question as a group.

## Day Two

Distribute page 58 and read the introduction aloud. If necessary, review the definitions of *summer* and *winter*. Then ask volunteers to describe what happens after leaves change color. (They fall off the tree, they become brittle, people make piles of leaves, and so on.) Distribute crayons and have students complete the first activity. Assist students with the second activity as needed.

## Day Three

**Vocabulary:** *evergreen*

**Materials:** pictures of evergreen trees

Distribute page 59 and read the introduction aloud. Show students the pictures of evergreen trees. Then distribute crayons and have students complete the activities. When students have finished, say: **The leaves on an evergreen tree look different from the leaves we studied yesterday. How are they different?** Help students describe the differences between the types of leaves. (pointy, sharp, like needles)

## Day Four

Distribute page 60 and read the introduction aloud. Distribute crayons and have students complete the activities. When students have finished, draw a Venn diagram on the board. Label the left circle "Trees with flat leaves," the right circle "Trees with evergreen leaves," and the middle circle "Both." Help students compare and contrast the two types of trees.

## Day Five

Tell students they will review everything they've learned about different kinds of leaves. Distribute page 61 and help students complete the activities as needed. Go over the answers together.

Name _____

Daily Science
Big Idea 2
WEEK 4

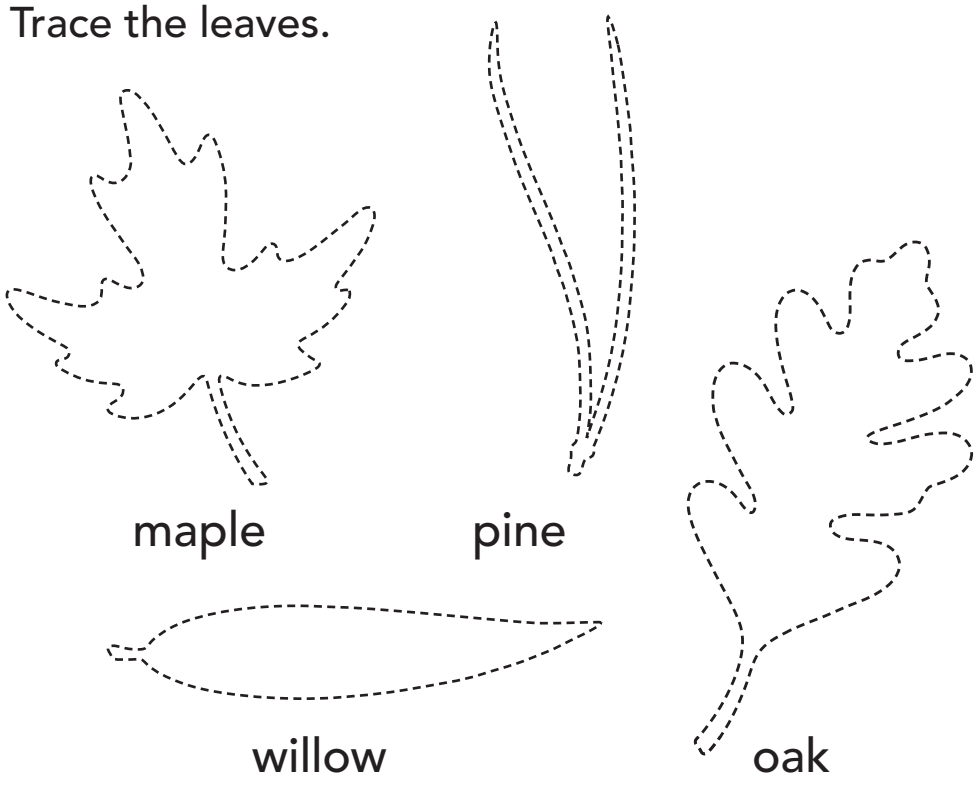
Day 1

*Weekly Question*

# Why do trees have different kinds of leaves?

All trees have **leaves**. The leaves have many different shapes.

**1.** Trace the leaves.




**2.** Complete the sentence. Write the word.

There are many kinds of ☐☐☐☐☐☐.

**Talk**

What kinds of leaves do you see where you live?

**Vocabulary**

**leaves**
*the parts of a plant or tree that take in light and air to make food*

Name _____

Daily Science
Big Idea 2
WEEK 4

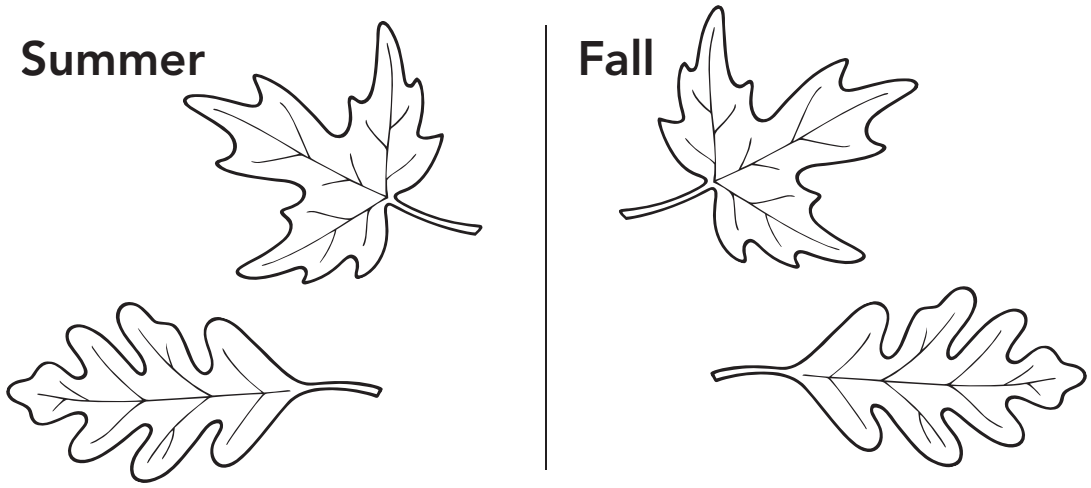
Day 2

*Weekly Question*

# Why do trees have different kinds of leaves?

Some trees have flat leaves. They live in places that are warm in the summer and cold in the winter. The flat leaves soak up the sun. In the spring and summer, the leaves are green. In the fall, the leaves turn red, yellow, and orange.

**1.** Color the leaves in the summer.
Color the leaves in the fall.




**2.** Complete the sentences. Write the words.

**green** **red**

Leaves are ☐☐☐☐☐ in the summer.

Some leaves turn ☐☐☐ in the fall.

Name _____

Daily Science
Big Idea 2
WEEK 4

Day 3

*Weekly Question*

# Why do trees have different kinds of leaves?

An **evergreen** tree grows in cold places. It has thin, pointy leaves that look like needles. The leaves stay green all year. They store food and water.

**Vocabulary**

**evergreen**
*a tree with short or long, thin leaves that stay green all year*

**1.** Color the picture.

**2.** Complete each sentence. Use the words in the box.

**cold** **leaves** **trees**

There are many tall evergreen _____.

The trees have pointy _____.

It is _____ in the forest.

Name _____

Daily Science
Big Idea 2
WEEK 4

Day 4

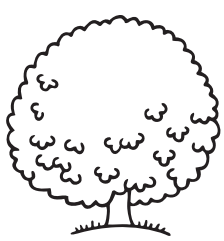
*Weekly Question*

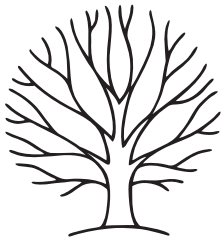
# Why do trees have different kinds of leaves?

Evergreen trees keep their leaves all year long. The leaves are strong. They do not blow off. Trees with flat leaves lose their leaves in the winter. The leaves dry up and fall off.

**1.** Match the tree in the summer to the same tree in the winter. Color the trees.

**Summer** **Winter**





**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Evergreen trees keep their leaves all year long. | yes | no |
| Trees with flat leaves lose their leaves in the summer. | yes | no |

Name _____

Daily Science
Big Idea 2
WEEK 4

Day 5

*Weekly Question*

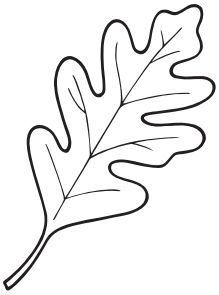
# Why do trees have different kinds of leaves?

**1.** Circle the leaves that turn colors in the fall. Draw a box around the leaves that stay green all year.

maple

pine

willow



oak

**2.** Complete each sentence. Use the words in the box.

**evergreen** **leaves** **winter**

The _____ on trees have many different shapes.

Trees with flat leaves lose their leaves in _____.

An _____ tree has pointy leaves.

**3.** Circle the correct answer.

Trees have different kinds of leaves because of where the trees live. yes no

Name _____

Unit Review

*Comprehension*

# Habitats

Daily Science

Big Idea 2

WEEK 5

Read each question. Fill in the bubble next to the correct answer.

**1.** Which one lives in the desert?

Ⓐ whale
Ⓑ evergreen
Ⓒ camel

**2.** Which one is a habitat?

Ⓐ ocean
Ⓑ fox
Ⓒ nest

**3.** Where can a whale live?

Ⓐ lake
Ⓑ ocean
Ⓒ forest

**4.** Which trees stay green through the cold winter?

Ⓐ trees with flat leaves
Ⓑ trees with no leaves
Ⓒ trees with leaves like needles

Name _____

Unit Review

*Vocabulary*

# Word Sort

Daily Science Big Idea 2 WEEK 5

**1.** Write each word in the correct list.

| | | |
|---|---|---|
| **forest** | **camel** | **ocean** |
| **den** | **lake** | **whale** |
| **desert** | **krill** | **nest** |

| Habitats | Animals | Animal homes |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | |
| _____ | | |

**2.** Complete the sentences. Use the words in the box.

**evergreen** **stores** **habitat** **leaves**

A _____ is where an animal lives.

A camel _____ fat in its hump.

An _____ tree stays green during winter.

Some trees lose their _____ in the winter.

Name _____

Daily Science
Big Idea 2
WEEK 5

Unit Review

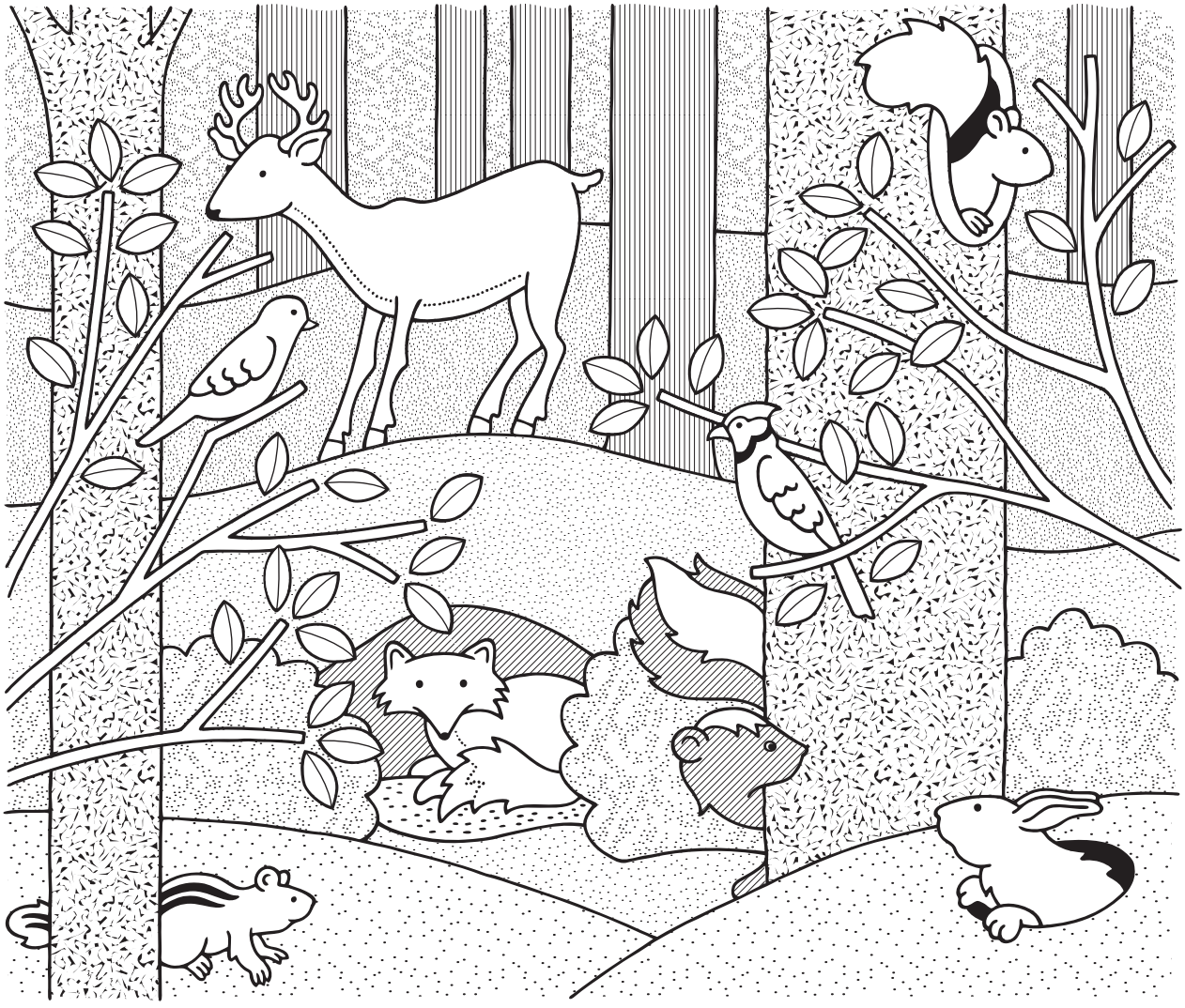
*Visual Literacy*

# Picture the Habitat

1. Look at the habitat below. What is it called? Circle your answer.

desert forest ocean

2. How many animals can you find? Circle and color them.



Name _____

Unit Review

*Hands-on Activity*

# Look at a Leaf


A scientist looks closely at things. Look closely at a leaf. Use the questions to help you. Then draw and label what you learn.

**What You Need**

- a leaf
- a hand lens
- crayons

1. Touch the leaf. Is it rough or smooth?

   _____

2. Listen. What sounds can you make with your leaf? _____

3. Smell. What does your leaf smell like?

   _____

4. Can you find lines, bumps, or holes?

   _____

Use crayons to make a rubbing of your leaf.


# The sun, moon, and stars are objects in our sky.

**Key Concept**
Objects in the Sky

**National Standard**
The sun, moon, and stars all have properties, locations, and movements that can be observed and described. Objects in the sky have patterns of movement.

When students look into the sky, they get a small glimpse of the vast universe. In this unit, students will develop a greater understanding of the objects they see in the sky and the relationship between those objects and Earth. Students will learn about:

- objects in the night sky;
- Earth's rotation;
- characteristics and importance of the sun; and
- characteristics of the moon.

## Teacher Background

The Earth rotates, causing night and day. During the day we see the sun, the closest star to Earth. Its light and heat are responsible for sustaining all life on our planet. At night we see stars, the moon, and sometimes planets. Stars are objects that give off their own light. They are incredibly massive but are so distant from Earth that they appear as tiny lights in the sky.

The moon is the closest object to Earth. Like Earth, it is made from rock. It also gets its light from the sun, and its shape changes depending on where the moon is in relation to us.

Some planets can be seen from Earth, but they are hard to tell apart from stars. When planets are visible, they usually look like big stars. Like the moon, they reflect light from the sun.

**For specific background information on each week's concepts, refer to the notes on pp. 68, 74, 80, and 86.**

## Unit Overview

### WEEK 1: What causes day and night?

**Connection to the Big Idea:** Students begin by discussing Earth as a planet in space. They discover that Earth rotates. As Earth rotates, different sides of it are exposed to the sun's light, which produces day. The shaded side is night. The 24 hours it takes for Earth to rotate all the way around creates day and night.

**Content Vocabulary:** *day, Earth, night, rotates*

### WEEK 2: What do we see in the sky at night?

**Connection to the Big Idea:** Students begin by thinking of what might be in the sky that they can see at night. They talk about things in the sky, such as stars, the moon, and planets. They learn that the sun is a star and that stars produce their own light. They also learn that the moon and planets reflect light from stars.

**Content Vocabulary:** *moon, planet, stars, sun*

### WEEK 3: Why do we need the sun?

**Connection to the Big Idea:** Students learn that the sun is necessary to sustain life on Earth. They discuss a plant's need for sun to produce its food and how the sun's energy provides us with heat, light, and ultimately our food.

**Content Vocabulary:** *energy, heat, light*

### WEEK 4: Can anything live on the moon?

**Connection to the Big Idea:** Students begin by comparing the sun to the moon. They discover that the moon is made of rock, like a planet. They discuss the fact that the sun produces heat and light, whereas the moon reflects light. Because the moon is more like a planet in terms of what it's made of, students think about what the moon would need to support life.

**Content Vocabulary:** *crater, moon, mountain*

### WEEK 5: Unit Review

You may choose to do these activities to review concepts about the sun, moon, and stars.

**p. 92: Comprehension** Students answer questions about key concepts in the unit.

**p. 93: Vocabulary** Students use content vocabulary to complete sentences and match words to their definitions.

**p. 94: Visual Literacy** Students match captions to pictures about the sun, moon, and sky.

**p. 95: Hands-on Activity** Students color different phases of the moon on paper plates and move around the classroom. Number students in 8 groups, one for each phase of the moon. Show each group the moon phase that matches their number. Distribute the plates and markers to each group. Use the instructions and the pictures of the moon phases on the student page to conduct the activity.


# Week 1

## What causes day and night?

Earth rotates once every 24 hours, spinning at about 1,000 miles per hour. As Earth rotates, the part of the surface we are on turns toward, and then away from, the sun. This makes it seem as if the sun moves across the sky. The longest day in North America is during the summer. The longest night is during the winter. Students may wonder what causes the day's length to change throughout the year. This is because of the Earth's tilt and its orbit around the sun, not the speed of Earth's rotation.

***The sun, moon, and stars are objects in our sky.***

### Day One

**Vocabulary:** *Earth, rotates*

**Materials:** globe

Ask students to describe the difference between night and day. (It's light during the day and dark at night.) Distribute page 69 and read the introduction to students. Point out the picture of Earth, and use a globe to demonstrate how the Earth rotates. To reinforce the concept, you may want to have students stand and pretend to be Earth, spinning slowly around. Have students complete the activities, and assist as needed.

### Day Two

**Vocabulary:** *day*

**Materials:** globe and flashlight

Distribute page 70 and read the introduction aloud. Have students look at the first picture. Turn on the flashlight and point it at the globe. Say: **This flashlight is like the rays of the sun. If we are on this side of Earth, will we see the sun?** (yes) **Will it be day or night?** (day) Have students complete the first activity. For the next two activities, review the meanings of *morning*, *noon*, and *evening*. Discuss where the sun is in the sky during those times of day. Then help students complete the sentence.

### Day Three

**Vocabulary:** *night*

**Materials:** globe and flashlight (optional)

Distribute page 71 and read the introduction aloud. Show students the picture, or turn on the flashlight and point it at the globe. Then point to the side of Earth not facing the sun. Ask: **If we are on this side of Earth, will we see the sun?** (no) **Will it be day or night?** (night) Have students complete the activities, and assist them as needed.

### Day Four

Distribute page 72 and read the introduction aloud. Have students complete the first activity. Then read aloud the question at the bottom of the page and discuss it with students.

### Day Five

Tell students they are going to review what they've learned about day and night. Distribute page 73 and have students complete it. Go over the answers together.

Name _____

Daily Science

Big Idea 3

WEEK 1

Day 1

*Weekly Question*

# What causes day and night?

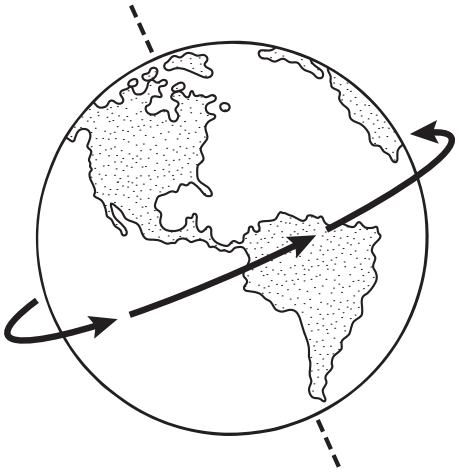
**Earth** spins all the way around, or **rotates**, once every day. Each day, the sun and moon seem to move across the sky. But they are not moving. Earth is!

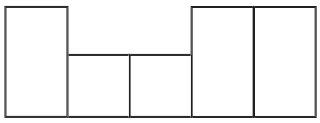
**Vocabulary**

**Earth**
*the planet we live on*

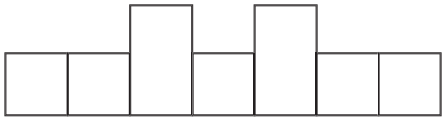
**rotates**
*spins around*

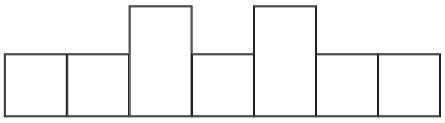
1. Complete the sentence about the picture.



 rotates.

2. Complete each sentence. Write the word.

Every 24 hours, Earth  .

Every time the Earth  ,
we have a new day.

Name _____

Daily Science
Big Idea 3
WEEK 1

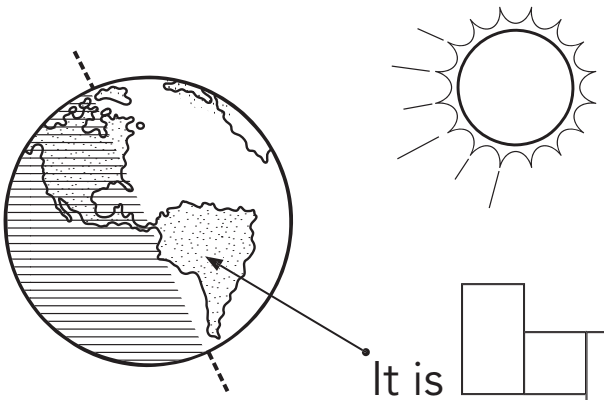
Day 2

*Weekly Question*

# What causes day and night?

As Earth rotates, the side we live on turns toward the sun. We see the sun. It is **day**.

**1.** Look at the picture. Complete the sentence.



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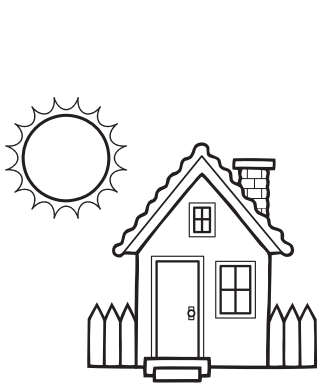
**Vocabulary**

**day**
*the time after the sun rises and before it sets, when it is light outside*

**2.** Color the sun at each time of day.



morning

noon

evening

**3.** Complete the sentence. Write the word.

At _____, the sun is straight over my head.

Name _____

Daily Science

Big Idea 3

WEEK 1

Day 3

*Weekly Question*

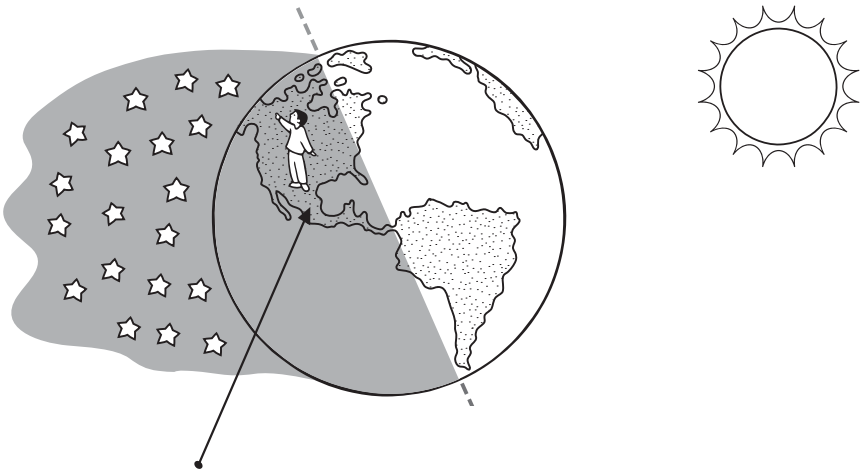
# What causes day and night?

Earth keeps **rotating** all day. The side we live on turns away from the sun. It becomes dark. It is **night**. We see the stars.

**Vocabulary**

**night**
*the time after the sun sets and before it rises, when it is dark outside*

**1.** Look at the picture. Complete the sentence.



It is ☐ here.

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| At night, our side of Earth is away from the sun. | yes | no |
| At night, it is dark all over Earth. | yes | no |
| At night, Earth stops rotating. | yes | no |

Name _____

Daily Science
Big Idea 3
WEEK 1

Day 4

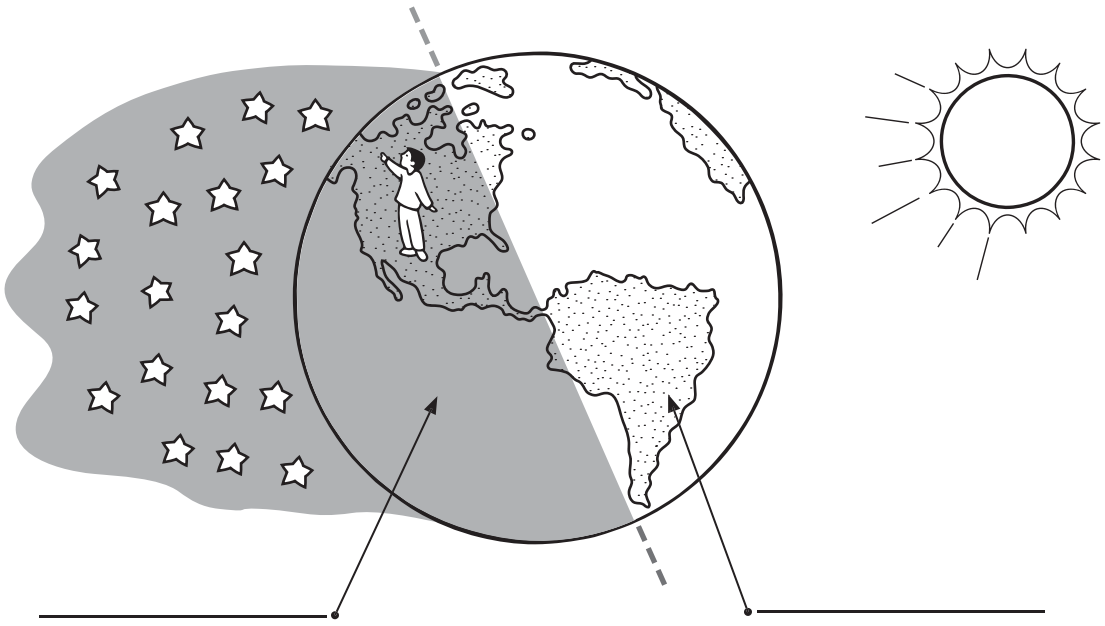
*Weekly Question*

# What causes day and night?

Earth never stops rotating. So we always have night and day!

Look at the picture. Where is it day on Earth? Where is it night? Write the words from the box.

**day** **night**



**Talk**

If it is day where you live, what do you think it is like on the other side of Earth? Why?

Name _____

Daily Science

Big Idea 3

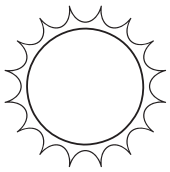
WEEK 1

Day 5

*Weekly Question*

# What causes day and night?

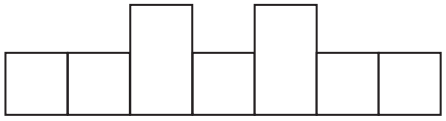
**1.** Look at the picture. Then complete the sentences. Write the words.

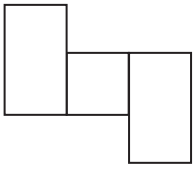


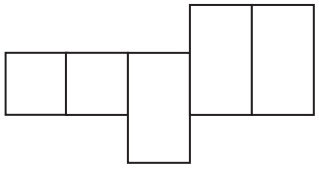
**day**

**rotates**

**night**

Earth  to make night and day.

The dog is awake during the  .

The dog is asleep at  .

**2.** Complete the sentences. Use the words from above.

The Earth _____ like a spinning top.

When light from the sun hits Earth, it is _____.

During the _____, we are on the other side.

This is what causes day and night!


# Week 2

# What do we see in the sky at night?

*The sun, moon, and stars are objects in our sky.*

The night sky is full of stars. Stars are huge balls of superheated gas made mostly from hydrogen. They create an enormous amount of heat that we see as light. The sun is the closest star to Earth. It is so bright that it blocks the light of other stars during the day. The sun also reflects light off the other objects we see in the night sky, such as the moon.

## Day One

**Vocabulary:** *stars, sun*

**Materials:** pictures of stars at night (optional)

Distribute page 75 and read the introduction aloud. Explain: **Stars are always in the sky. We just can't see them until nighttime, when the sky is dark.** You may choose to show students pictures of stars. Then read aloud each sentence in activity 1 and have students write the correct word in the boxes. Complete activity 2 as a group.

## Day Two

**Vocabulary:** *moon*

**Materials:** flashlight and a ball of foil

Distribute page 76 and read the introduction to students. Say: **The moon looks bright because it reflects the light of the sun.** Turn off the lights and hold up the ball of foil. Say: **This foil is like the moon. It doesn't look very bright in the dark, does it?** Shine the flashlight on the foil. Say: **The flashlight makes the foil bright. This is like the sun shining on the moon.** Help students complete the activities.

## Day Three

**Vocabulary:** *planet*

Distribute page 77 and read the introduction to students. Then say: **Earth is a planet. Other planets look small, like stars, because they are far away from Earth.** Help students complete the first activity. Then distribute crayons and have students complete the second activity independently.

## Day Four

Distribute page 78 and read the introduction to students. Then read aloud each riddle in the first activity and have students circle their answers. When they have finished, say: **People have looked at the stars for thousands of years. They try to make pictures from the stars, much like when you connect the dots to make a picture.** Read the introduction to item 2 and help students complete the activity.

## Day Five

Tell students they will review what they've learned this week about the things in the night sky. Distribute page 79 and have students complete the activities. Go over the answers together.

Name _____

Daily Science

Big Idea 3

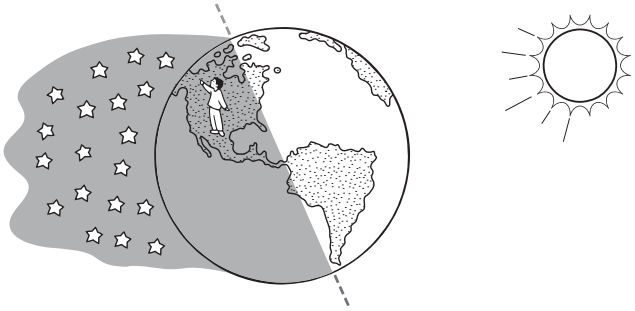
WEEK 2

**Day 1**

***Weekly Question***

# What do we see in the sky at night?

We see **stars** shining at night. Stars give off their own light. The **sun** is a star. It is the closest star to Earth. But we can't see it at night because we are facing away from it.



**Vocabulary**

**stars**
*objects in the sky that give off light*

**sun**
*the star closest to Earth*

**1.** Complete the sentences. Write the words.

At night, you can see ☐☐☐☐☐.

All ☐☐☐☐☐ give off their own light.

The ☐☐☐☐☐ are very far from Earth.

Our ☐☐☐ is a star.

**2.** Complete the rhyme.

The nearest star is really very _____.

Name _____

Daily Science
Big Idea 3
WEEK 2

Day 2

*Weekly Question*

# What do we see in the sky at night?

We see the **moon** shining at night. It is made of rock. It does not make its own light. Light from the sun makes the moon shine bright.

**1.** Complete the sentence. Write the word.

We see the ☐☐☐☐ in the sky.

**2.** Complete the sentences. Circle the correct words.

The moon is made of ____.

light cheese rock

The moon gets light from ____.

Earth the sun people

**Vocabulary**

**moon**
*a large object near Earth that is made of rock and gets light from the sun*

Name _____

Daily Science
Big Idea 3
WEEK 2

Day 3

*Weekly Question*

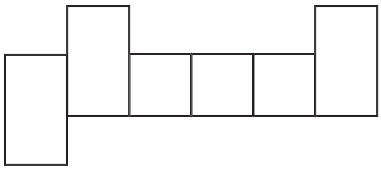
# What do we see in the sky at night?

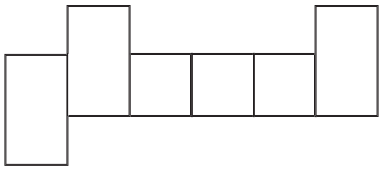
Sometimes you can see **planets** in the night sky. They do not make their own light. But light from the sun makes them bright. The closest planets to Earth are Mars and Venus.

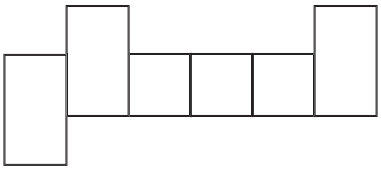
**Vocabulary**

**planet**
*a large object in space that does not make its own light*

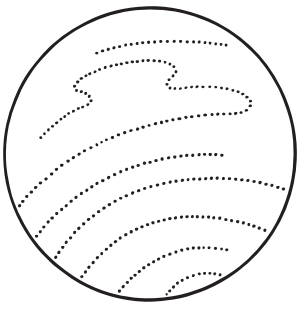
**1.** Complete each sentence. Write the word.

Earth is a  .

A  does not make its own light.

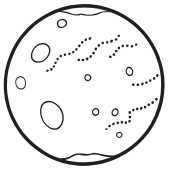
Light from the sun makes a  bright.

**2.** Color Venus brown. Color Earth blue and green. Color Mars red.



Venus

Earth



Mars

Name _____

Daily Science
Big Idea 3
WEEK 2

Day 4

*Weekly Question*

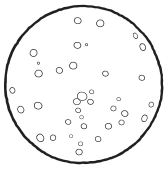
# What do we see in the sky at night?

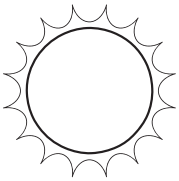
At night, you can see stars. But during the day, you cannot see stars. That's because the sun is so bright.

**1.** Answer each riddle. Circle the correct picture.

You can never see me during the day. Who am I?

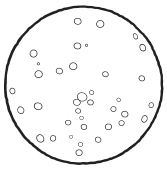

stars

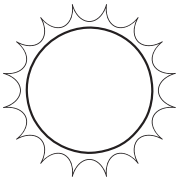

moon


sun

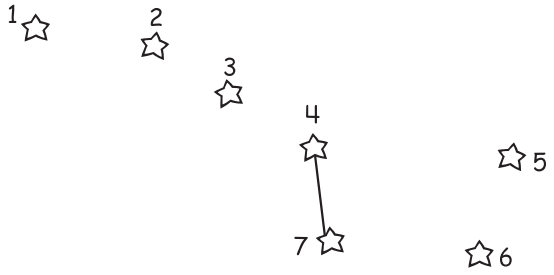
You can never see me at night. Who am I?


stars


moon


sun

**2.** People like to find shapes in stars. One famous shape is the Big Dipper. Connect the stars. Do you see the Big Dipper?



Name _____

Daily Science
Big Idea 3
WEEK 2

Day 5

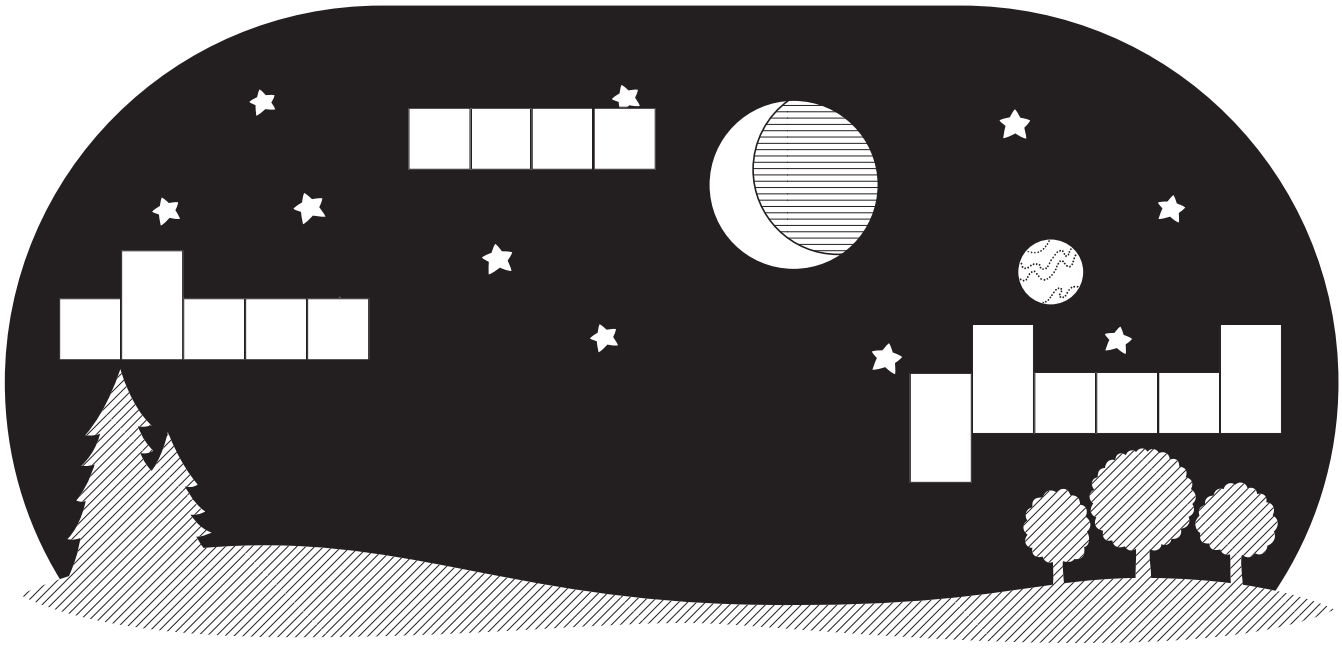
*Weekly Question*

# What do we see in the sky at night?

**1.** Answer each question. Circle **yes** or **no**.

| | | |
|---|---|---|
| Is Mars a planet? | yes | no |
| Does the moon make its own light? | yes | no |
| Do we see stars at night? | yes | no |

**2.** What do we see in the night sky? Write the words.




*The sun, moon, and stars are objects in our sky.*

# Week 3

# Why do we need the sun?

Without the sun there would be no life on Earth. The sun is our most important energy source. It provides us the warmth we need to survive. Plants use sunlight to make their food. In turn, plants are food for us and the animals we eat.

The sun is a giant ball of superheated gas made mostly from hydrogen and helium. It takes eight minutes for light from the sun to reach Earth.

## Day One

**Vocabulary:** *energy, heat, light*

Distribute page 81 and read the introduction aloud. Say: **Energy means power that you can use. When you play outside, you are using your own energy. When you turn on the lights or plug in a heater, you are using energy from somewhere else to make light and heat.** Have students complete the activities, and assist as needed.

## Day Two

Distribute page 82 and read the introduction aloud. Then say: **The sun is important because we need its heat and light. But we also get heat and light from other things.** Guide students through the first activity, discussing what should be circled and why. Point out that some things give off both light and heat. Then have students complete the second activity. Assist as needed.

## Day Three

Distribute page 83 and read the introduction to students. You may want to draw a flowchart on the board representing a food chain that shows the relationship between the sun, plants, and animals. Then guide students through the activities.

## Day Four

Ask: **What is the sun like, especially during the summer? Is it hot? Is it bright?** (yes) Distribute page 84 and read the introduction to students. Then read the first sentence and ask: **Which picture shows us how to keep from getting sunburned?** Have students draw a line to the correct picture. Repeat for the other two sentences. For activity 2, read each sentence aloud and have students circle their answers. For the discussion activity, have students brainstorm ways to stay safe in the sun. (wear a hat and long-sleeved shirt, drink lots of liquids, stay inside during the hottest part of the day, and so on)

## Day Five

Tell students they are going to review everything they've learned about the sun. Distribute page 85. Help students complete the activities. Then go over the answers together.

Name _____

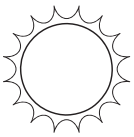
Day 1

*Weekly Question*

# Why do we need the sun?

Daily Science Big Idea 3 WEEK 3

The sun gives us **energy**. We see the energy as **light**. We feel the energy as **heat**.



**1.** Complete the sentences. Write the words.

We get _____ from the sun.

The sun's _____ helps us see.

The sun's _____ keeps us warm.

**2.** Answer the riddle. Write the word.

I give off my own light.
I give heat to Earth.
Everyone needs me.
What am I?

I am the _____.

**Vocabulary**

**energy**
*power we can use*

**heat**
*energy we can feel*

**light**
*energy we can see*

Name _____

Daily Science
Big Idea 3
WEEK 3

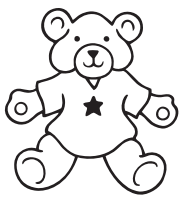
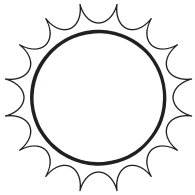
Day 2

*Weekly Question*

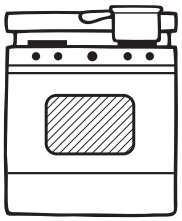
# Why do we need the sun?

The sun gives us light and heat. We need light and heat to live.

**1.** Circle all the things that can give us light or heat.





**2.** Answer the questions. Use the words in the box.

| light | heat |
|---|---|

What helps us see at night? _____

What helps us cook our food? _____

What do we get from fire? _____ and

_____

Name _____

Daily Science
Big Idea 3
WEEK 3

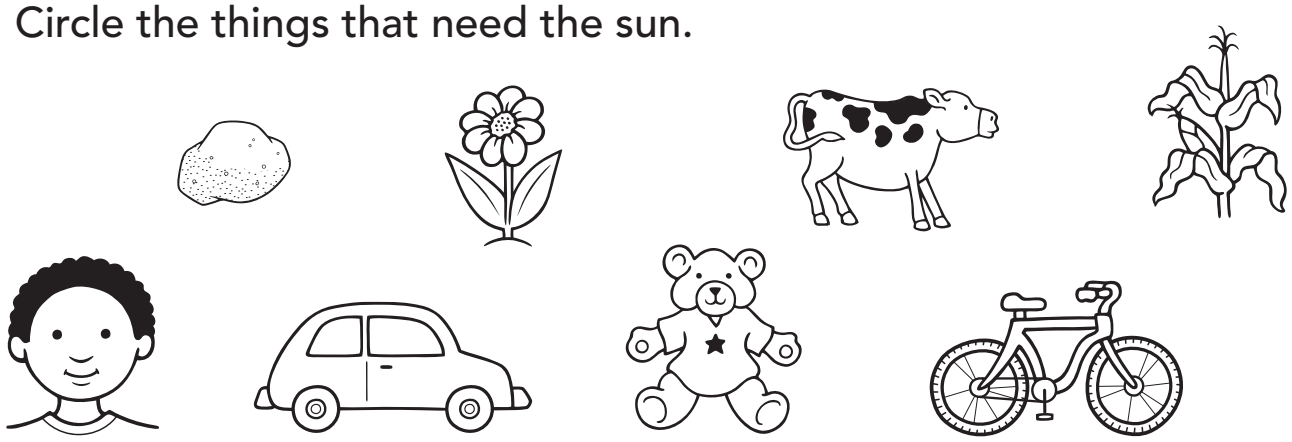
Day 3

*Weekly Question*

# Why do we need the sun?

The sun helps plants make food. Without the sun, plants would not grow. Without plants, animals and people would not have food.

**1.** Circle the things that need the sun.



**2.** Complete the sentences. Use the words in the box.

| food | live | plants |
|---|---|---|

Without the sun, _____ would not grow.

Without plants, we would not have _____.

Without the sun, we could not _____.

Name _____

Daily Science
Big Idea 3
WEEK 3

**Day 4**

***Weekly Question***

# Why do we need the sun?

The sun helps us live. But it is also very powerful. We must stay safe in the sun.

**1.** Read each sentence. Draw a line to the picture that shows what to do in the sun.

Do this so the sun doesn't burn your skin. •

Do this so you don't get thirsty in the sun. •

Do this so the sun doesn't hurt your eyes. •

• 

• 


• 

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| We could live without the sun. | yes | no |
| The sun is very weak. | yes | no |
| We must be careful in the sun. | yes | no |

**Talk**

What are other ways to stay safe in the sun? Tell your partner.

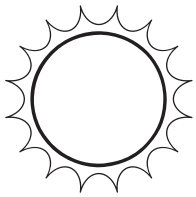
Name _____

Daily Science
Big Idea 3
WEEK 3

**Day 5**

***Weekly Question***

# Why do we need the sun?



**1.** Complete each sentence. Fill in the bubble next to the correct answer.

The sun gives us _____.

Ⓐ water Ⓑ energy Ⓒ cold air

Plants need the sun to _____.

Ⓐ grow Ⓑ see Ⓒ play

Plants and animals need _____ to live.

Ⓐ light and heat Ⓑ toys and books

**2.** Complete the sentences. Use the words in the box.

| Earth | sun | heat |
|---|---|---|

Animals need light and _____ from the sun.

Plants need light from the _____ to make food.

There would be no life on _____ without the sun.


*The sun, moon, and stars are objects in our sky.*

# Week 4

# Can anything live on the moon?

Like Earth and other planets, the moon is made of rock and minerals. It has mountains, valleys, and craters. The moon is so small that its weak gravity cannot maintain an atmosphere. As a result, there is no air or water on the moon, and it is extremely hot during the day and cold at night. The moon rotates at the same rate that it orbits Earth. This means that we always see the same side of the moon. Humans have landed on the moon, but without the presence of water, it is unlikely that a colony will ever be built.

## Day One

**Vocabulary:** *moon*

Distribute page 87 and read the introduction. Point to Earth in the picture on the page. Say: **Here is Earth.** Point to the moon and ask: **What is this?** (the moon) **Is it the closest thing to Earth?** (yes) Distribute crayons and have students color the picture and complete activity 1. Then have them complete activity 2. Provide assistance as needed.

## Day Two

**Vocabulary:** *crater, mountain*

Distribute page 88 and read the introduction. Point to the picture of the craters on the moon and say: **There are many rocks in space. Sometimes these rocks fall onto the moon. When they hit the surface of the moon, they make holes. These holes are called craters**. Have students complete the activities. Assist as needed.

## Day Three

Distribute page 89 and read the introduction. Point out the diagram on the page and say: **We have different names for the moon when it changes shape. This picture shows us the different shapes and names of the moon.** Guide students through the diagram, reading the name of each phase as you point to it. Discuss what each shape looks like and how to follow the arrows from one moon to the next. Then distribute crayons and have students complete the first activity. For activity 2, read each sentence aloud and have students circle their answers.

## Day Four

Distribute page 90 and read the introduction. Ask students if they knew that we had visited the moon. Then say: **Scientists want to visit the moon again by 2018. Would you like to visit the moon?** Help students complete the first item. Distribute crayons and have students color the picture.

## Day Five

Tell students they are going to review everything they've learned about the moon. Distribute page 91 and have students complete it. Then go over the answers together.

Name _____

Daily Science
Big Idea 3
WEEK 4

Day 1

*Weekly Question*

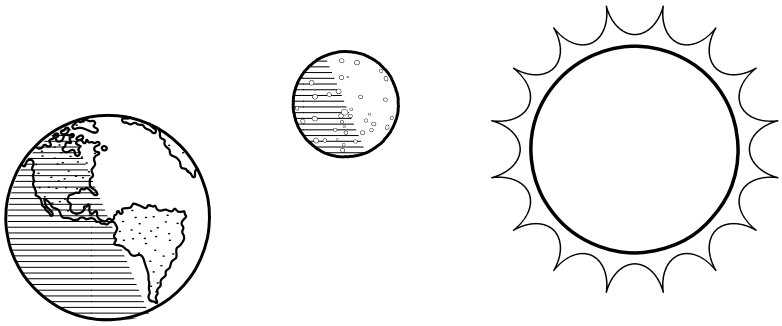
# Can anything live on the moon?

The **moon** is close to Earth. It is much closer to Earth than the sun is. But the moon is not like Earth. It is much smaller. It does not have air or water.

**Vocabulary**

**moon**
*a large object near Earth that is made of rock and gets light from the sun*

**1.** Color the picture. Circle the sun. Draw a box around the moon.



**2.** Complete the sentences. Circle the correct words.

The moon is _____ Earth than the sun is.

closer to farther from

Earth is _____ than the moon.

bigger smaller

There is no water or air on _____.

Earth the moon

Name _____

Daily Science
Big Idea 3
WEEK 4

Day 2

*Weekly Question*

# Can anything live on the moon?

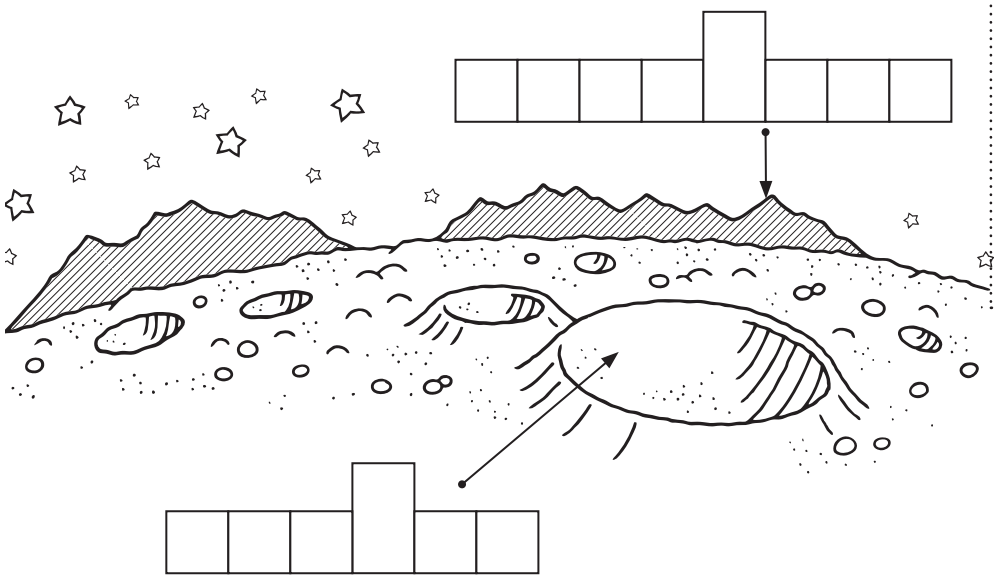
The moon is made of rock. It has **mountains** and **craters**. The craters look like bowls. They were made by things that crashed into the moon.

**Vocabulary**

**crater**
*a hole on the surface of the moon that is shaped like a bowl*

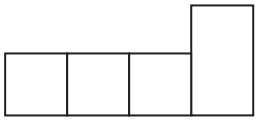
**mountain**
*a very tall object made from dirt and rocks*

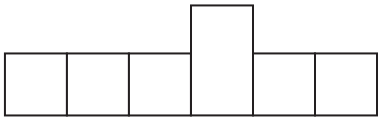
1. Look at the picture of the moon. Write the words.



2. Complete the sentences. Use the words in the box.

**crater** **rock**

The moon is made of  .

A  is like a big bowl.

Name _____

Daily Science
Big Idea 3
WEEK 4

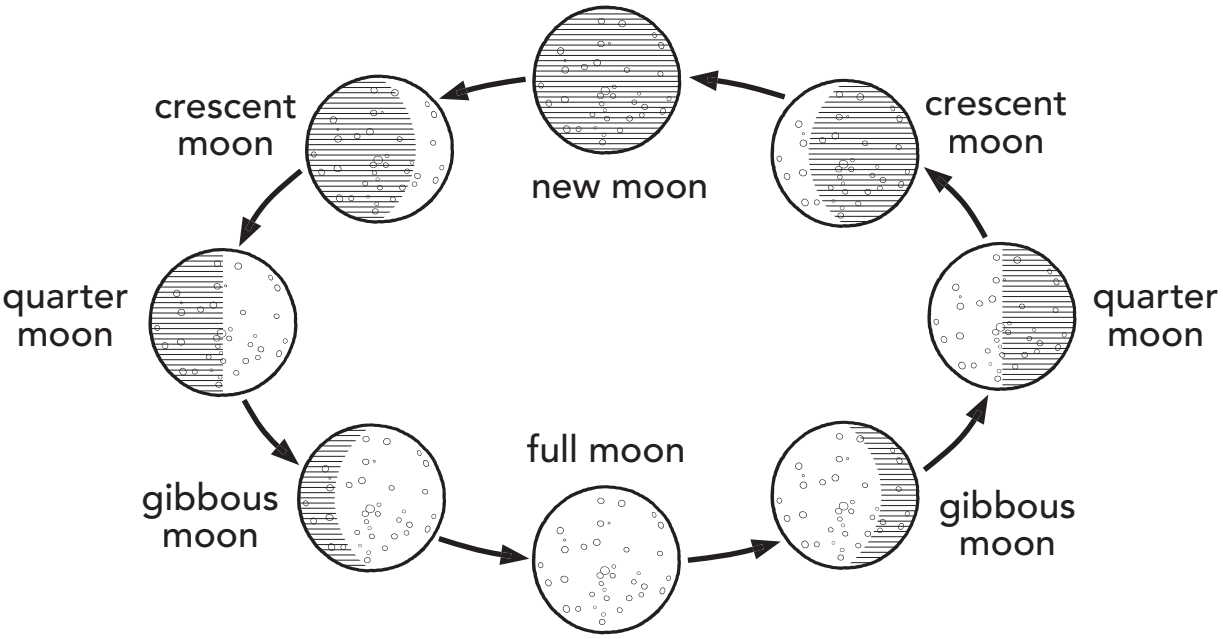
Day 3

*Weekly Question*

# Can anything live on the moon?

The moon gets light from the sun. But we can't always see the side of the moon that is in the sunlight. That is why the moon looks like it changes shape.

**1.** Color the picture. Use yellow for the part of the moon that is lit up. Use black for the part that is dark.




**2.** Look at the picture again. Circle **yes** or **no**.

| | | |
|---|---|---|
| You can see the whole moon when it is full. | yes | no |
| You can see part of the moon when it is new. | yes | no |
| A quarter moon is bigger than a crescent. | yes | no |

Name _____

Daily Science
Big Idea 3
WEEK 4

Day 4

*Weekly Question*

# Can anything live on the moon?

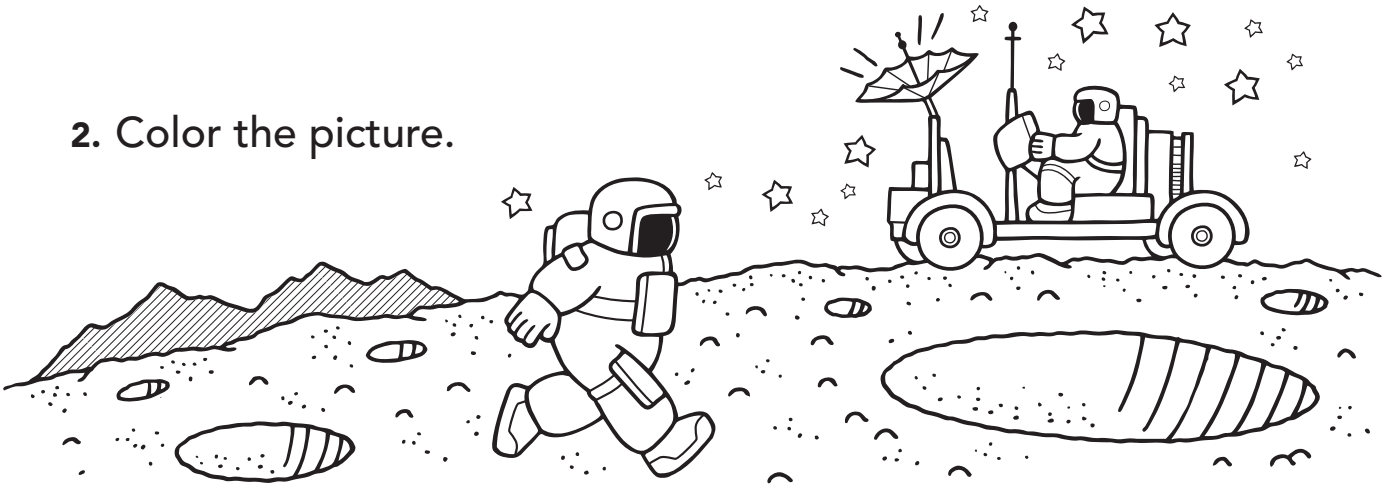
The moon is so close that we can visit it. We went to the moon in 1969. But we had to take our own air and water. Without air and water, we could not visit the moon.

**1.** Complete the rhymes. Use the words in the box.

| air | moon | water |
|---|---|---|

Someday soon,
You might go to the _____.
If you do go there,
Be sure to take some _____!
The trip is longer than you think,
So take _____ to drink.

**2.** Color the picture.



Name _____

Daily Science
Big Idea 3
WEEK 4

Day 5

*Weekly Question*

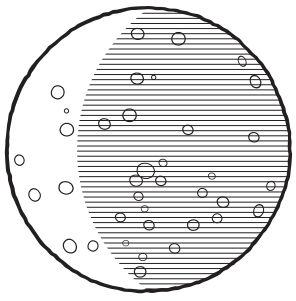
# Can anything live on the moon?

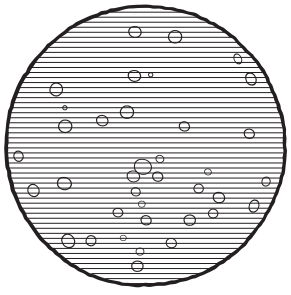
**1.** Read the sentences. Circle **yes** or **no**.

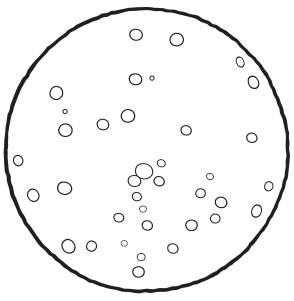
| | | |
|---|---|---|
| The moon is made of rock. | yes | no |
| The moon has air and water. | yes | no |
| The moon has craters. | yes | no |
| The moon makes its own light. | yes | no |

**2.** Name each picture. Write the words from the box.

**full** **new** **crescent**







_____ _____ _____

**3.** Answer the question. Write **yes** or **no**.

Can anything live on the moon? _____

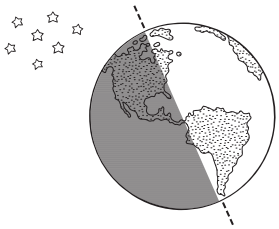
Name _____

Daily Science
Big Idea 3
WEEK 5

Unit Review

*Comprehension*

# Looking at the Sky



Read each sentence. Fill in the bubble next to the correct answer.

**1.** When can we see stars, planets, and the moon?

Ⓐ mostly during the day

Ⓑ mostly at night

Ⓒ all the time

**2.** We have day and night because _____.

Ⓐ the sun spins

Ⓑ the sun moves across the sky

Ⓒ Earth rotates

**3.** The sun's energy gives Earth _____.

Ⓐ light and heat

Ⓑ a moon and stars

Ⓒ rocks and water

**4.** The moon does <u>not</u> have _____.

Ⓐ craters

Ⓑ air and water

Ⓒ rocks

Name _____

Daily Science
Big Idea 3
WEEK 5

Unit Review

*Vocabulary*

# Be a Word Star!

**1.** Circle the word that completes each sentence.

Earth and Mars are both _____.

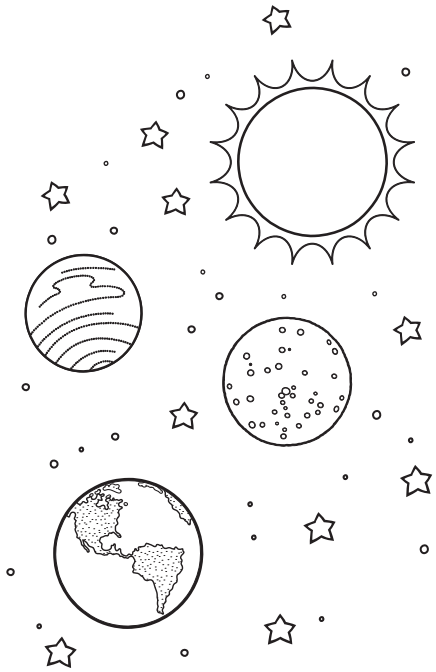
planets stars moons

The moon has mountains and _____.

energy planets craters

Earth _____ once every day.

heats lights rotates



**2.** Match each word on the left to its meaning.

| | |
|---|---|
| heat • | • the object that is closest to Earth |
| night • | • the time after the sun rises |
| moon • | • energy we can see |
| light • | • energy we can feel |
| day • | • the time after the sun sets |

Name _____

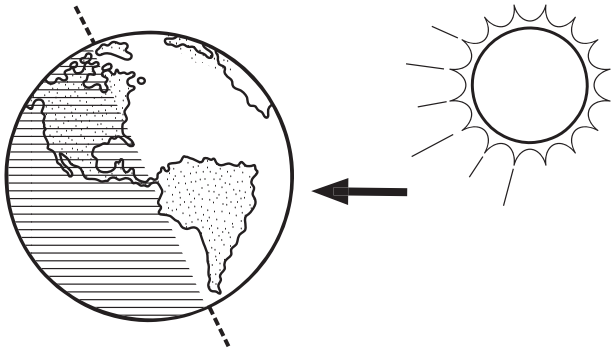
Unit Review

*Visual Literacy*

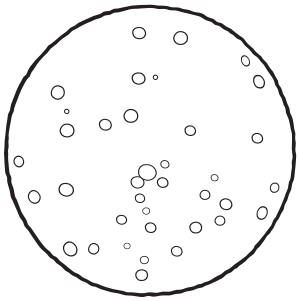
# Night and Day

Daily Science Big Idea 3 WEEK 5

Look at each picture. Read the captions below it. Fill in the bubble next to the caption that tells about the picture.

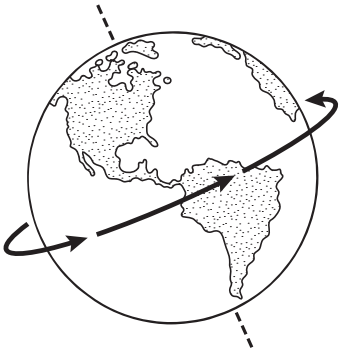


1. Ⓐ It is day here.
   Ⓑ We see stars at night.



2. Ⓐ It is day.
   Ⓑ The moon is full.

3. Ⓐ The moon gives us light.
   Ⓑ The sun gives us light.



4. Ⓐ Earth rotates.
   Ⓑ We need the sun to live.

Name _____

Unit Review

*Hands-on Activity*

# Moon Phase Fun

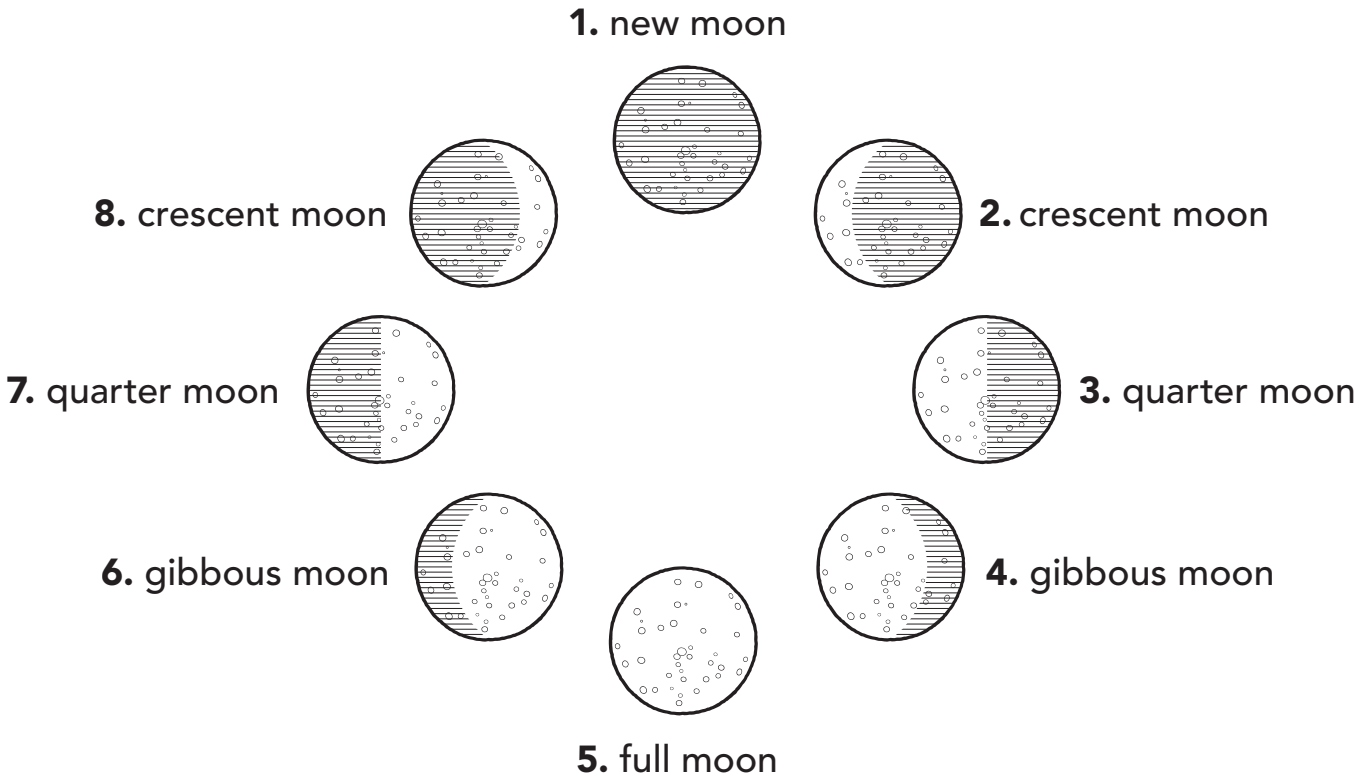
Daily Science Big Idea 3 WEEK 5

See how the moon looks to us as it goes around Earth.

**What You Need**

- a paper plate
- yellow and black markers or crayons

1. Get a number from your teacher.
2. Make your plate look like the moon that matches your number. Color your plate and add craters.
3. Stand in the right spot for your moon phase. Hold the plate high above your head!




Which moon did you make? Write its name. _____


# Different seasons have different weather.

**Key Concepts**
Seasons and Weather

**National Standard**
Weather changes from day to day and over the seasons.

Each season has its own special weather. Students will learn in this unit what the seasons are, what causes them, and how the weather changes from one season to the next. Students will study the following concepts:

- Earth's tilt on its axis and how the tilt affects weather;
- seasonal temperatures, including how to read a thermometer;
- seasonal weather changes and the weather associated with each season; and
- seasonal plant changes, including why flowers bloom in spring and trees lose their leaves in fall.

## Teacher Background

In this unit, students will learn that seasonal weather is caused by Earth's tilt and orbit around the sun. Because Earth is tilted on its axis, different parts of Earth receive different amounts of sun, which has the biggest impact on weather. From spring to summer, the northern hemisphere tilts toward the sun. The days are longer and temperatures are warmer. From fall to winter, the northern hemisphere tilts away from the sun. Days shorten and temperatures cool. This cycle repeats, creating the seasons.

Life on Earth responds to the seasonal changes. Plants begin growing in the spring, grow the most during the summer, and prepare for winter during the fall.

**For specific background information on each week's concepts, refer to the notes on pp. 98, 104, 110, and 116.**

## Unit Overview

### WEEK 1: Why is it hot in the summer?

**Connection to the Big Idea:** Students learn that Earth rotates on a tilted axis as it revolves around the sun, and that sunlight hits parts of Earth more directly at different times of the year. Students learn that direct sunlight makes the weather hotter and days longer, which causes summer.

**Content Vocabulary:** *axis, orbit, season, summer*

### WEEK 2: Why does it snow in the winter?

**Connection to the Big Idea:** Students learn the basic properties of winter, and that winter is caused by Earth's tilt away from the sun. They learn that the temperature is colder during winter, and that temperature is measured using a thermometer. Finally, they discover that snow and ice occur when the temperature drops below 32 degrees, as it often does in many places during winter.

**Content Vocabulary:** *icicles, snow, snowflakes, temperature, thermometer, winter*

### WEEK 3: Why are there a lot of flowers in the spring?

**Connection to the Big Idea:** Students learn that spring brings warmer weather, longer days, and rain. As a result, plants grow, flowers bloom, and the flowers produce seeds.

**Content Vocabulary:** *bloom, flowers, rain, spring*

### WEEK 4: Why do some trees lose their leaves in the fall?

**Connection to the Big Idea:** Students learn that the basic characteristics of fall are cooler temperatures and shorter days. They also learn that fall is often windy, and they learn how wind is formed. Finally, students learn that trees don't need their leaves during the fall because there is less sunlight for leaves to make food.

**Content Vocabulary:** *autumn, breeze, fall, gust, wind*

### WEEK 5: Unit Review

You may choose to do these activities to review concepts about the seasons and weather.

**p. 122: Comprehension** Students answer multiple-choice questions about key concepts in the unit.

**p. 123: Vocabulary** Students answer riddles using content vocabulary words from the unit.

**p. 124: Visual Literacy** Students correctly order the different seasons and draw pictures showing a tree during each season.

**p. 125: Hands-on Activity** Students build an anemometer (wind gauge) to measure how fast the wind is blowing. Review the instructions and materials on the student page ahead of time for details on how to conduct the activity.


# Week 1

# Why is it hot in the summer?

*Different seasons have different weather.*

Using simple explanations and demonstrations, students will see that Earth tilts on its axis as it rotates. Because of this tilt, sunlight directly hits different parts of Earth as it orbits the sun. The more direct the sunlight, the warmer the temperature. This creates summer heat and longer days. In the northern hemisphere, summer lasts from June through August. In the southern hemisphere, summer lasts from December through February.

## Day One

**Vocabulary:** *season, summer*

Write the name of each season on the board. Recite the names with students. Then distribute page 99 and read the introduction aloud. Have students complete the first activity. Then ask students what they like to do during the summer. (swim, eat ice cream, play outside, and so on) Point out the first picture for activity 2 and ask: **Do some people do this during the summer?** (yes) **Circle it.** Have students complete the activity independently.

## Day Two

**Vocabulary:** *axis*

**Materials:** globe

Distribute page 100 and read the introduction aloud. Show students the globe and point out where the globe is connected to the stand. Say: **This is like Earth's axis.** Slowly spin the globe. Ask: **Is Earth straight or tilted?** Then point out the picture for activity 1 and have students find Earth's axis on it. Distribute crayons and have students complete the first activity. For the second activity, read aloud each sentence and prompt students to circle their answers.

## Day Three

**Vocabulary:** *orbit*

**Materials:** globe

Distribute page 101 and read the introduction aloud. Say: **As Earth moves around the sun, the seasons change.** Use the globe to demonstrate Earth's orbit by having a student pretend to be the sun while you move the globe around him or her. Read the instructions for the first activity aloud and have students complete it. For the second activity, read aloud each sentence and have students fill in their answers.

## Day Four

Distribute page 102 and read the introduction aloud. Point out the cause and effect chart on the page. Say: **An effect is something that happens. A cause is why it happens.** Demonstrate a simple cause and effect for students, such as flipping a light switch and making the lights turn on and off. Then lead students through the activities.

## Day Five

Tell students they will review everything they've learned about summer. Have students complete page 103. Then go over the answers together.

Name _____

Daily Science

Big Idea 4

WEEK 1

Day 1

*Weekly Question*

# Why is it hot in the summer?

There are four **seasons** during the year. **Summer** is the season between spring and fall. It is hot during the summer. The days are long. Plants grow during the summer. Many people like to be outside.

**Vocabulary**

**season**
*a time of year with its own weather*

**summer**
*the season with the warmest weather*

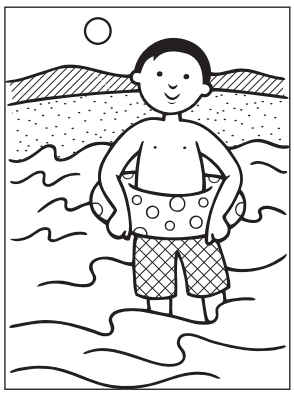
**1.** Complete the sentences. Write the words.

Each year has four ☐☐☐☐☐☐☐.

The days in ☐☐☐☐☐☐ are long.

Plants grow the most during ☐☐☐☐☐☐.

**2.** Circle what people do in the summer.




Name _____

Daily Science
Big Idea 4
WEEK 1

Day 2

*Weekly Question*

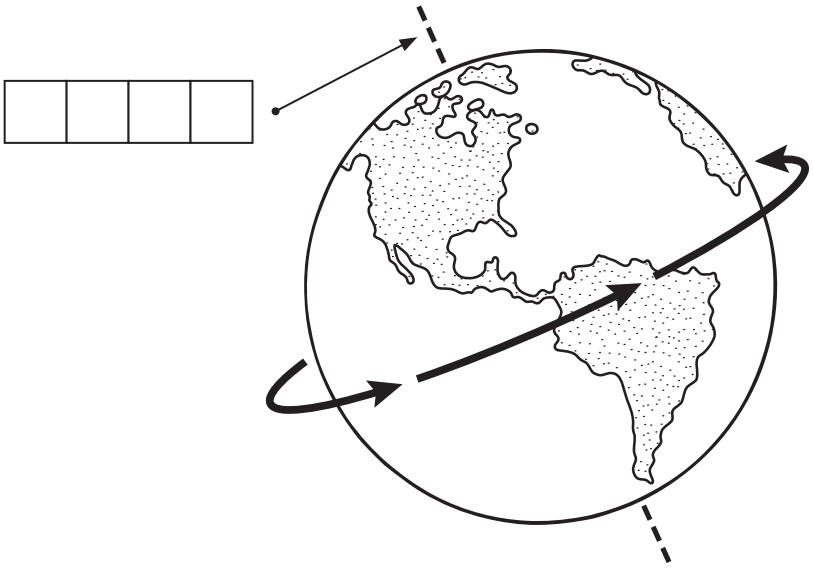
# Why is it hot in the summer?

Imagine a line that runs through the middle of Earth, from top to bottom. The line is tilted. This is Earth's **axis**. It is not a real line. It just helps us understand how Earth spins.

**Vocabulary**

**axis**
*an imaginary line that runs from Earth's north pole to its south pole*

1. Look at the picture. Write the word. Then color Earth.



2. Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Earth's axis is a real line. | yes | no |
| Earth's axis ends in the middle of the planet. | yes | no |
| Earth's axis is tilted. | yes | no |

Name _____

Daily Science
Big Idea 4
WEEK 1

Day 3

*Weekly Question*

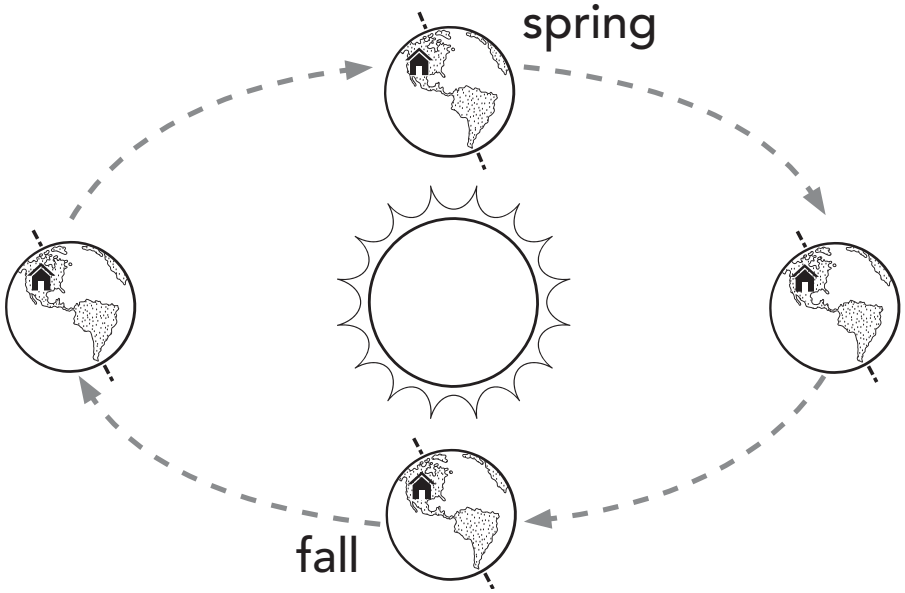
# Why is it hot in the summer?

Earth **orbits**, or moves around, the sun. As it does, the part of Earth that is tilted toward the sun gets more sunshine. That is when it is summer.

**Vocabulary**

**orbit**
*to move in a circle around something. Earth orbits the sun.*

**1.** Trace Earth's orbit. Circle the house where it is summer.




**2.** Complete the sentences. Write the words.

Earth ☐☐☐☐☐☐ around the sun.

Earth gets a lot of sun in the summer because its ☐☐☐☐ is tilted toward the sun.

Name _____

Daily Science
Big Idea 4
WEEK 1

Day 4

*Weekly Question*

# Why is it hot in the summer?

The extra sunshine we get in summer makes the weather hot. It makes the days longer, too.

**1.** Look at the chart. Read each cause. Circle the effect.

| Cause | Effect |
|---|---|
| Earth is tilted toward the sun in summer. | We get _____ sunshine.<br>a lot of  a little |
| We get a lot of sunshine during summer. | The sunshine makes the weather _____.<br>cool  hot |
| We get a lot of light during summer. | The light makes the days _____.<br>short  long |

**2.** Complete the sentences. Write the words.

We get more light and heat in ☐☐☐☐☐☐.

This is because we get more ☐☐☐ in summer.

Name _____

Daily Science
Big Idea 4
WEEK 1

Day 5

*Weekly Question*

# Why is it hot in the summer?

**1.** Complete each sentence. Fill in the bubble next to the correct word.

Earth's _____ runs from the top to the bottom.

Ⓐ tilt Ⓑ axis Ⓒ summer

The season with the warmest weather is _____.

Ⓐ fall Ⓑ spring Ⓒ summer

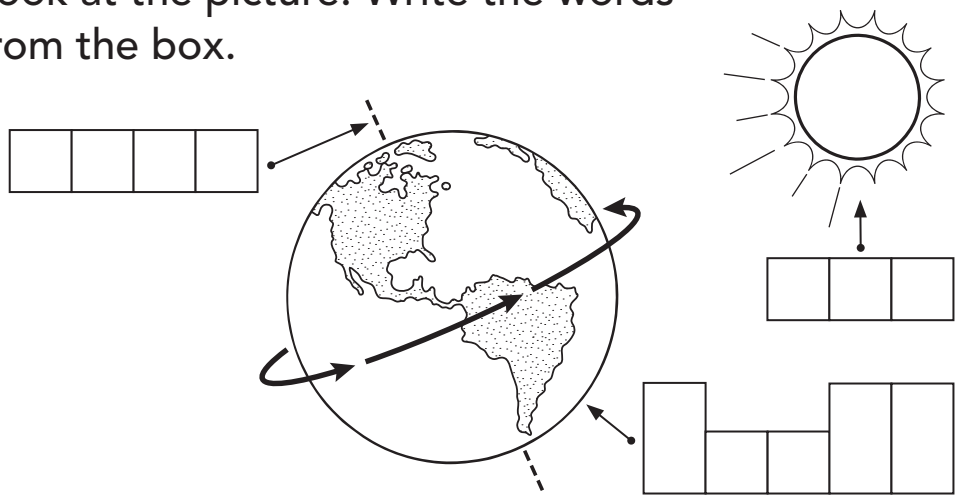
As Earth moves around the sun, we get _____.

Ⓐ axis Ⓑ seasons Ⓒ tilt

Earth _____ the sun once every year.

Ⓐ orbits Ⓑ visits Ⓒ passes

**2.** Look at the picture. Write the words from the box.



axis

Earth

sun


# Week 2

# Why does it snow in the winter?

*Different seasons have different weather.*

Just as our part of Earth receives more sunlight in the summer because it tilts toward the sun, we receive less sunlight in the winter because we tilt away from the sun. Less sunlight means shorter days and colder temperatures. When temperatures fall below 32 degrees Fahrenheit, we have the chance for snow. Many parts of the country get snow every year, while some parts, usually those farther south, rarely get snow. Cold temperatures also bring hail, freezing rain, and sleet.

## Day One

**Vocabulary:** *winter*

Distribute page 105. Read the introduction aloud. Discuss with students what the weather is like during winter where you live. For the first activity, read the sentences aloud and have students write *winter* to complete each one. For the second activity, read the sentences aloud and have students circle their answers. For the discussion activity, read the question aloud and divide students into pairs, or complete the activity as a group.

## Day Two

**Vocabulary:** *temperature*

**Materials:** globe

Distribute page 106 and read the introduction aloud. Then show students how Earth is tilted away from the sun during winter by having a volunteer represent the sun while you move the globe around him or her. Have students complete the first activity. For the second activity, read the question and discuss what each picture shows. Have students circle their answers.

## Day Three

**Vocabulary:** *thermometer*

**Materials:** thermometer

Distribute page 107 and read the introduction aloud. Show students the thermometer and demonstrate how to read it. Have students complete the first activity. Distribute crayons and assist them with the second activity if needed. You may want to complete the third activity as a group.

## Day Four

**Vocabulary:** *icicles, snow, snowflakes*

Distribute page 108 and read the introduction aloud. Tell students that 32 degrees is the temperature at which rain turns into snow because it is the temperature when water freezes. Guide students through the first activity by pointing to each picture and reading its label. For the second activity, read the sentence aloud and have students write their answer. For the third activity, read each sentence and have students circle their answers.

## Day Five

Tell students they will review everything they've learned about winter, temperature, and thermometers. Have students complete page 109. Then go over the answers together.

Name _____

Daily Science
Big Idea 4
WEEK 2

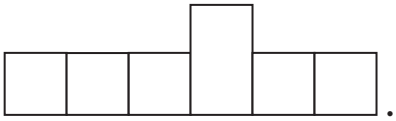
Day 1

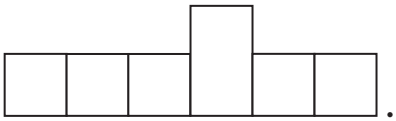
*Weekly Question*

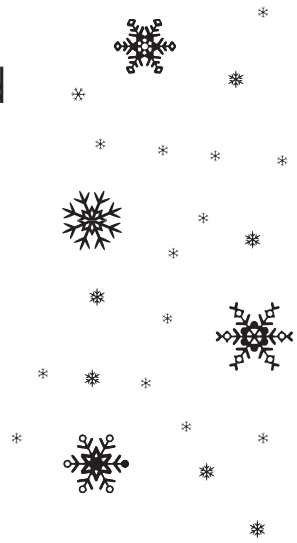
# Why does it snow in the winter?

**Winter** is the coldest season. The days are shorter. Many plants do not grow. In some places, it snows.

**1.** Complete each sentence. Write the word.

Some places have a very cold  .

Plants do not grow during  .



**2.** Read the sentences. Do these things happen where you live during winter? Circle **yes** or **no**.

| | | |
|---|---|---|
| People swim outside. | yes | no |
| People wear coats and hats. | yes | no |
| Days are shorter and colder. | yes | no |
| Flowers start to grow. | yes | no |

**Talk**

How do you know when winter is coming? Tell your partner.

**Vocabulary**

**winter**
*the coldest season, between fall and spring*

Name _____

Daily Science
Big Idea 4
WEEK 2

Day 2

*Weekly Question*

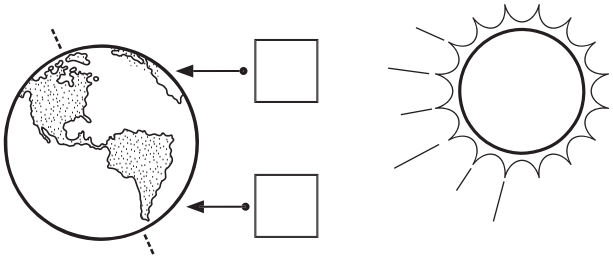
# Why does it snow in the winter?

Our part of Earth is tilted away from the sun during winter. We get less sunlight. The **temperature** goes down.

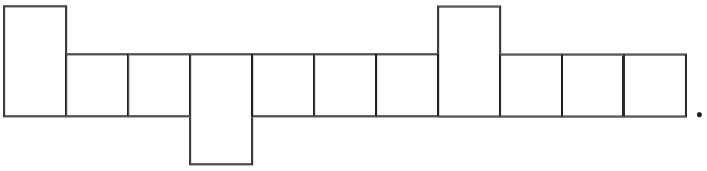
**Vocabulary**

**temperature**
*how hot or cold something is*

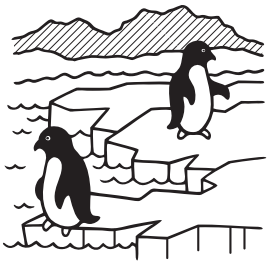
1. Where is it winter? Put an **X** in the correct box. Then complete the sentence.



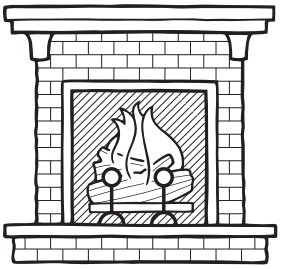
Less sunlight means a lower


.

2. Do you think the temperature in each place is **warm** or **cold**? Circle your answer.



warm cold



warm cold

warm cold

Name _____

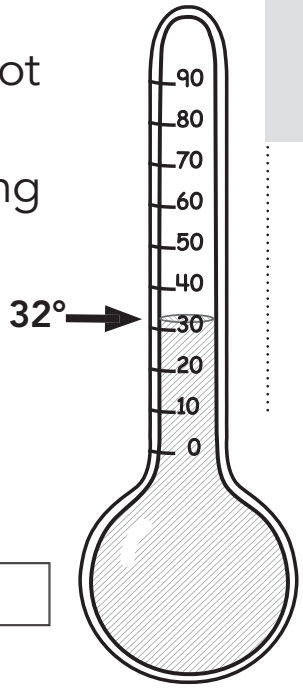
Daily Science
Big Idea 4
WEEK 2

Day 3

*Weekly Question*

# Why does it snow in the winter?

We use a **thermometer** to tell us how hot or cold something is. A thermometer measures temperature in degrees. During winter, the temperature in some places goes below 32 degrees. That's cold enough to freeze water!




**Vocabulary**

**thermometer**
*a tool to measure temperature*

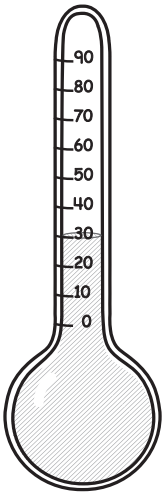
**1.** Write the word.

A  measures temperature.

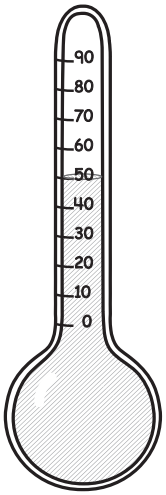
**2.** Write the number. Color up to it on the thermometer.

When the temperature is _____ degrees, water freezes.

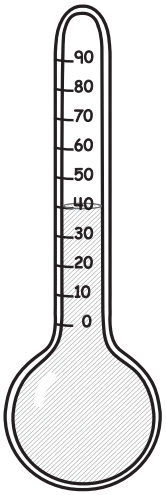
**3.** Read each thermometer. Write the temperature.




_____ degrees




_____ degrees




_____ degrees

Name _____

Daily Science
Big Idea 4
WEEK 2

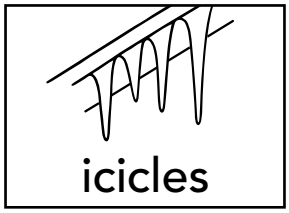
Day 4

*Weekly Question*

# Why does it snow in the winter?

In places where the temperature goes below 32 degrees, **snow** may fall. Snow is made of tiny frozen drops of water. They are called **snowflakes**. **Icicles** may also form in the winter.

**1.** Match the pictures on the left to the big picture.


icicles


snowflakes

**2.** Complete the sentence. Write the word.

It may ☐☐☐☐ in the winter.

**3.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Snow is made from icicles. | yes | no |
| Snow can form when it is colder than 32 degrees. | yes | no |
| Snowflakes and icicles are made from frozen water. | yes | no |

**Vocabulary**

**icicles**
*long, thin pieces of ice made from dripping water that has frozen*

**snow**
*tiny frozen drops of water, stuck together*

**snowflakes**
*tiny frozen drops of water*

Name _____

Daily Science
Big Idea 4
WEEK 2

Day 5

*Weekly Question*

# Why does it snow in the winter?

**1.** Complete each sentence. Circle the correct answer.

The coldest season of the year is _____.

summer fall winter

The _____ is how hot or cold something is.

winter temperature weather

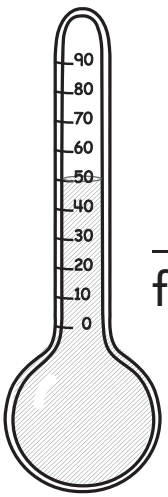
A _____ is a tool that measures temperature.

snowflake thermometer ruler

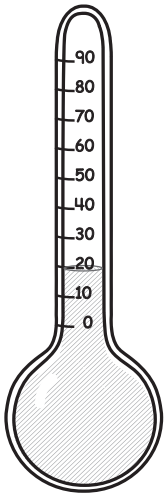
In winter, our part of Earth is tilted _____ the sun.

away from toward around

**2.** Look at each thermometer. Does it show **above** or **below** freezing? Write the word.




_____
freezing




_____
freezing


# Week 3

# Why are there a lot of flowers in the spring?

As winter turns to spring, flowering plants grow and bloom. They do this because the weather is warm and wet, and there is more sunlight during the day. Plants need these conditions for healthy growth.

Flowers are also necessary for making seeds, and they need the time during spring and summer for the seeds to begin growing new plants.

***Different seasons have different weather.***

## Day One

**Vocabulary:** *spring*

**Materials:** globe

Distribute page 111 and read the introduction aloud. Use the globe to review with students how Earth is tilted and how the seasons are affected by how much sun different parts of Earth receive. Then have students complete the first two activities. For the third activity, read each question and the answer choices aloud. Then have students circle their answers.

## Day Two

**Vocabulary:** *bloom, flowers*

Distribute page 112 and read the introduction aloud. Ask students what they think of when they hear the word *spring*. (flowers, rainy days, warmer weather, baby animals, and so on) Distribute crayons and have students complete the first activity. Read the completed sentences as a class. For the discussion activity, have students work in pairs or discuss as a class. (plants wouldn't grow; they would freeze)

## Day Three

**Vocabulary:** *rain*

Distribute page 113 and read the introduction aloud. Say: **Winter has cold, dry air. Spring has warmer, wet air. When they mix, it makes rain.** Guide students through the first activity by reading the first sentence and then asking: **Which picture does this sentence describe?** (the last one) Say: **Draw a line to it.** Repeat with the other two sentences. For the second activity, read the poem aloud and have students complete it independently. Then distribute crayons and have students draw their pictures.

## Day Four

**Materials:** flowers (optional)

Distribute page 114 and read the introduction aloud. Point out the pictures and read the names of the flowers on the page. If you brought in real flowers, allow students to examine them. Say: **Flowers help plants grow. They make seeds that grow into new plants.** Distribute crayons and have students complete the first activity. For the second activity, read each sentence aloud and have students circle their answers.

## Day Five

Tell students they will review everything they've learned about spring and plants. Have them complete page 115. Go over the answers together.

Name _____

Daily Science

Big Idea 4

WEEK 3

Day 1

*Weekly Question*

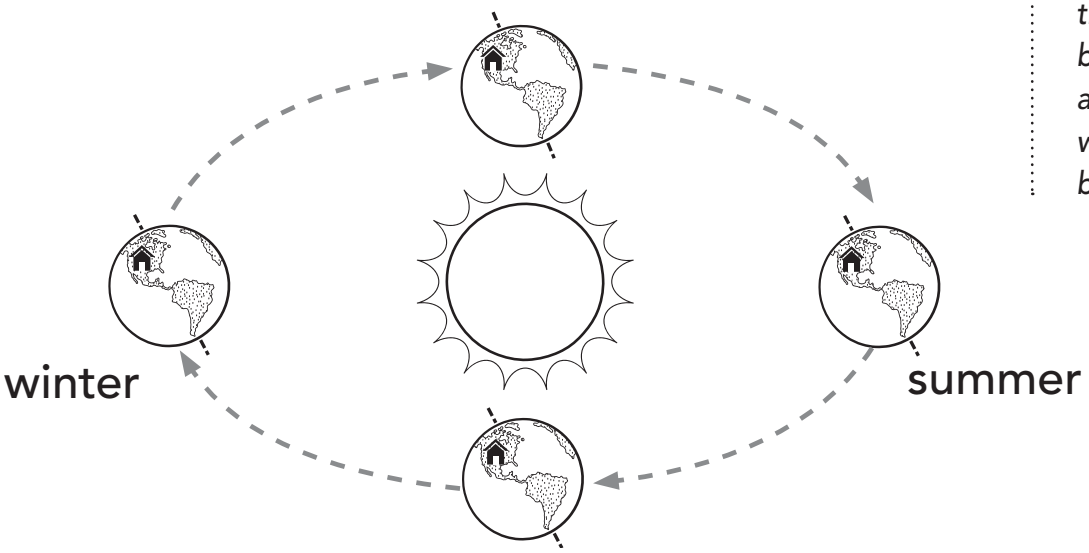
# Why are there a lot of flowers in the spring?

**Spring** is the season between winter and summer. The temperature gets warmer. The days get longer.

**Vocabulary**

**spring**
*the season between winter and summer, when the weather becomes warmer*

**1.** Trace Earth's orbit. Circle the house where it is spring.




**2.** Complete the sentence. Write the word.

In _____, the weather gets warmer.

**3.** Read each question. Circle the answer.

What season comes after spring? summer winter

What season has longer days? winter spring

Name _____

Daily Science
Big Idea 4
WEEK 3

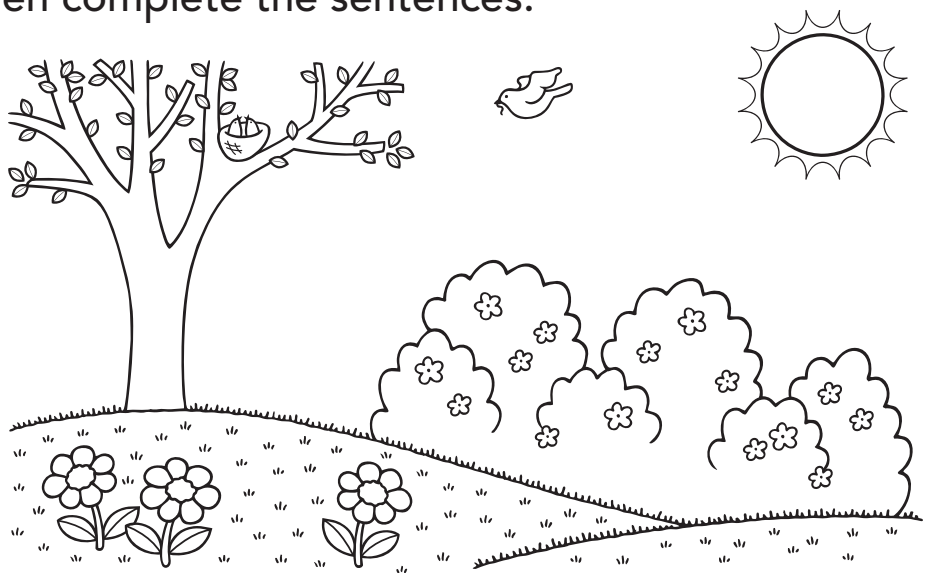
Day 2

*Weekly Question*

# Why are there a lot of flowers in the spring?

Plants need heat and light to grow. When spring comes, plants get more heat and light. **Flowers** begin to **bloom**.

Color the picture below.
Then complete the sentences.



In spring, many plants grow ☐☐☐☐☐☐☐.

The flowers start to ☐☐☐☐☐.

**Talk**

What do you think would happen to plants if spring was cold like winter? Tell your partner.

**Vocabulary**

**bloom**
*to grow and open*

**flowers**
*the parts of plants that make seeds and fruit*

Name _____

Daily Science
Big Idea 4
WEEK 3

Day 3

*Weekly Question*

# Why are there a lot of flowers in the spring?

Some places get a lot of **rain** in spring. Warm, wet air mixes with cold air. The two kinds of air make rain clouds. The rain helps plants grow.

**Vocabulary**

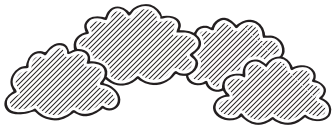
**rain**
*water drops that fall from clouds*

**1.** Read each sentence. Draw a line to the matching picture.

The rain helps plants grow. •

Warm air and cold air make rain clouds. •

Plants make new flowers in spring. •

• 

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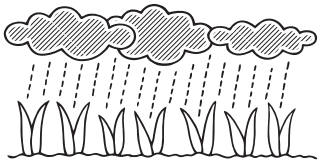
• 

**2.** Complete the poem. Draw a picture of yourself in the rain.

The sun is gone.

The ☐☐☐☐ has begun.

I'm getting wet,

But I'm having fun!

Name _____

Daily Science
Big Idea 4
WEEK 3

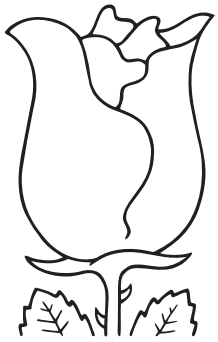
Day 4

*Weekly Question*

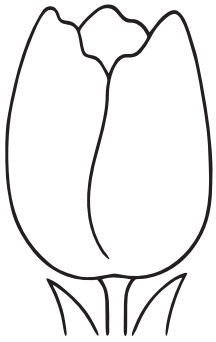
# Why are there a lot of flowers in the spring?

There are many kinds of flowers in spring. Some are big. Some have a lot of colors. Some flowers smell sweet. But they all need the same things. They need warmth, light, and water. That is why they all bloom in the spring!

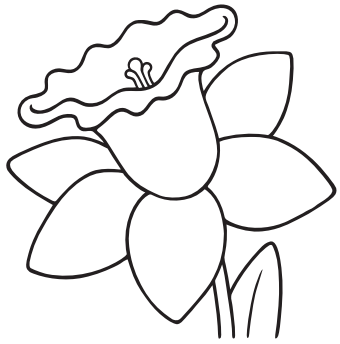
**1.** Read the name of each flower. Then color the pictures.



rose



tulip



daffodil

**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Flowers need light and water to grow. | yes | no |
| All flowers smell bad. | yes | no |
| There are many kinds of flowers. | yes | no |

Name _____

Daily Science

Big Idea 4

WEEK 3

Day 5

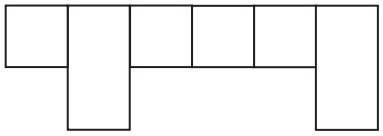
*Weekly Question*

# Why are there a lot of flowers in the spring?

**1.** Read the sentences. Do these things happen in the spring? Circle **yes** or **no**.

| | | |
|---|---|---|
| There is a lot of rain in some places. | yes | no |
| The days are shorter and colder. | yes | no |
| Plants grow and make flowers. | yes | no |

**2.** Complete the sentence. Write the word.

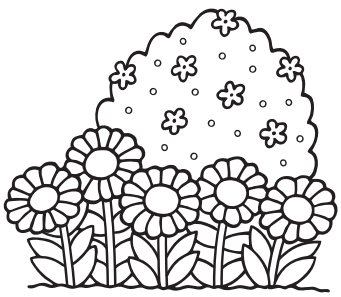
The season after winter is  .

**3.** Look at the pictures.

What happens first? Write **1** under it.

What happens next? Write **2** under it.

What happens last? Write **3** under it.



_____ _____ _____


# Week 4

# Why do some trees lose their leaves in the fall?

*Different seasons have different weather.*

In the fall, or autumn, many living things begin preparations for winter. This often means collecting and reserving food for the winter. It also means saving energy by becoming dormant, or being less active. In regions where the climate is varied, the leaves of deciduous trees begin to turn colors and fall off. This is because as the nights grow longer and the weather becomes colder and drier, leaves use more energy than they produce. Trees drop their leaves to conserve energy and water for the winter.

## Day One

**Vocabulary:** *autumn, fall*

**Materials:** photos of trees in the fall

Distribute page 117. Show students the photos and read the introduction aloud. Discuss what fall is like in your area. Distribute red, orange, yellow, and brown crayons and have students complete the first activity. Then read the directions for activity 2 aloud and have students complete it independently.

## Day Two

**Materials:** globe

Distribute page 118 and read the introduction aloud. Use the globe to review Earth's tilt and orbit around the sun. For the first activity, remind students that fall comes after summer and before winter. Point out the direction of Earth's orbit. Say: **Earth is moving this way. So where is Earth after summer?** Have students circle their answer. For the second activity, read the first cause and then each effect. Ask students to match the effect with the cause. Then read the second cause and the remaining effect. Ask students if the cause and effect match.

## Day Three

**Vocabulary:** *breeze, gust, wind*

Distribute page 119 and read the introduction aloud. Have students stand and pretend a light breeze is blowing on them. Then have them pretend a strong gust is blowing. Discuss the difference. Then distribute crayons and have students complete the first activity. When students have finished, ask volunteers to explain their thinking. Then read the poem for activity 2 and have students write the correct words in the blanks.

## Day Four

Distribute page 120. Read the introduction and the sentences for activity 1, prompting students to circle their answers. Then distribute crayons and have students complete the second activity.

## Day Five

Tell students they will review everything they've learned about trees in the fall. Guide them through the activities on page 121. Go over the answers together.

Name _____

Daily Science
Big Idea 4
WEEK 4

Day 1

*Weekly Question*

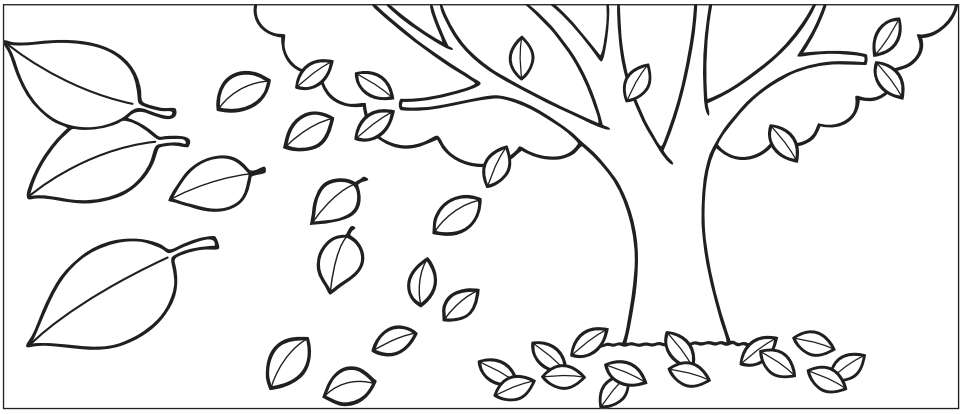
# Why do some trees lose their leaves in the fall?

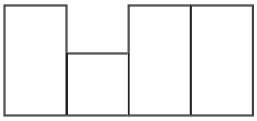
**Fall** is the season after summer and before winter. Another name for fall is **autumn**. The weather gets colder. The days get shorter. Leaves on some trees turn red, orange, yellow, and brown. Then the leaves fall off.

**Vocabulary**

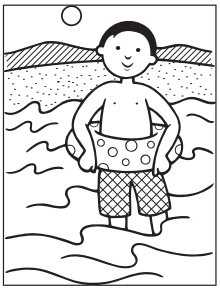
**autumn** or **fall** *the season between summer and winter, when there is less daylight and the weather cools*

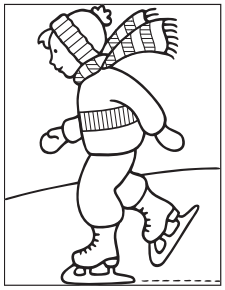
**1.** Color the leaves. Then complete the sentence.



In the  , leaves turn many colors.

**2.** Which of these happens in the fall? Circle the picture.





Name _____

Daily Science
Big Idea 4
WEEK 4

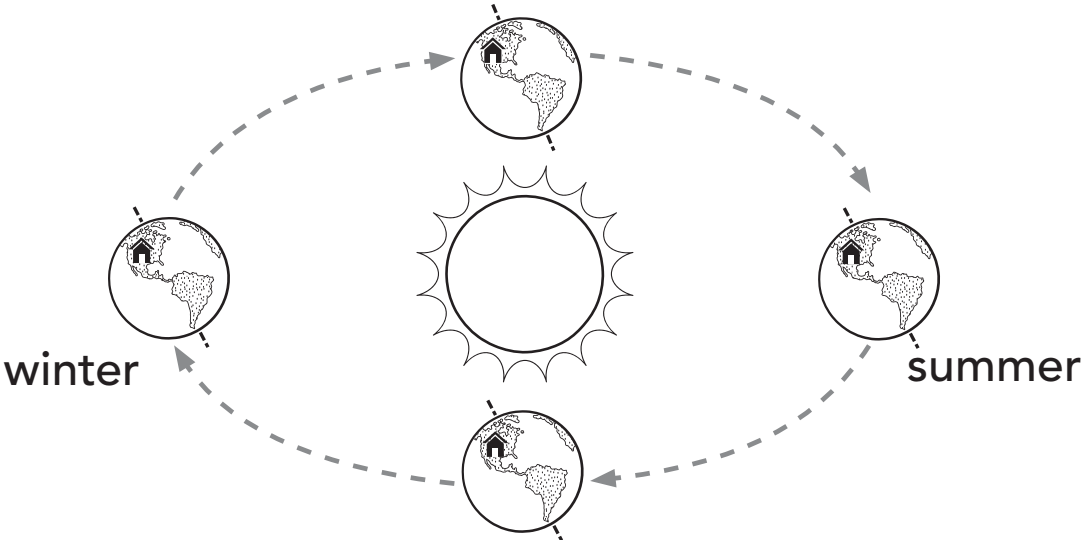
Day 2

*Weekly Question*

# Why do some trees lose their leaves in the fall?

In the fall, Earth begins to tilt away from the sun. Less sunlight means the days start growing shorter. The weather begins to cool. Winter is coming. Plants must get ready.

**1.** Circle the house where it is fall.




**2.** Read each cause. Draw a line to its effect.

| Cause | | Effect |
|---|---|---|
| Earth gets less sunlight in the fall. | • | We have four seasons. |
| Earth orbits the sun. | • | Days are cooler and shorter. |

Name _____

Daily Science
Big Idea 4
WEEK 4

Day 3

*Weekly Question*

# Why do some trees lose their leaves in the fall?

In the fall, the warm and wet air of summer is replaced by cool and dry air. When warm and cool air mix, they make **wind**. The wind helps blow leaves off the trees. A **gust** is a big wind. A **breeze** is a small wind.

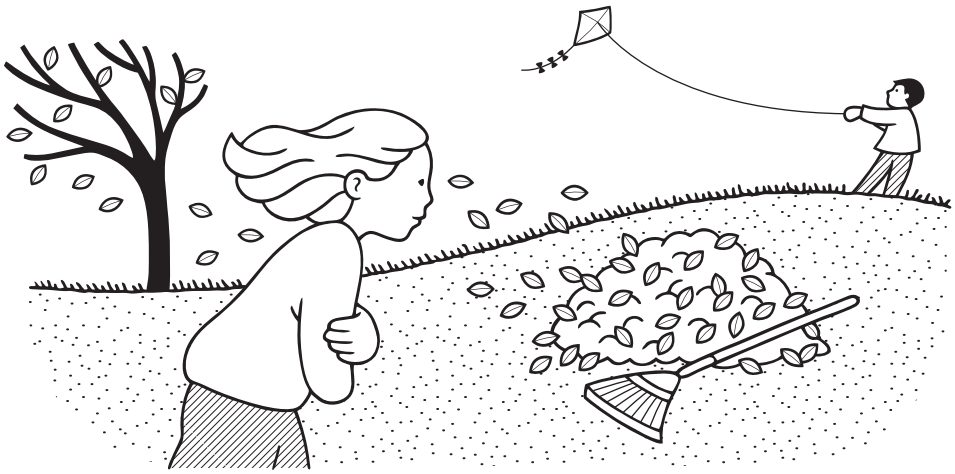
**Vocabulary**

**wind**
*air that is moving*

**breeze**
*a light wind*

**gust**
*a strong wind*

1. Look at the picture. Which way is the wind blowing? Draw an arrow. Color the picture.



2. Complete the poem. Use the words in the box.

**breeze** **gust**

A little _____ is nice and soft.

But a strong _____ blows your hat right off!

Name _____

Daily Science
Big Idea 4
WEEK 4

Day 4

*Weekly Question*

# Why do some trees lose their leaves in the fall?

Trees use their leaves to get energy from the sun. But in the fall, there is less sunlight because the days are shorter. The cold, dry air makes leaves dry up and fall off.

**1.** Complete the sentences. Circle the correct words.

There is _____ sunlight in the fall.

more less

Air that is _____ makes leaves fall off trees.

cold and dry warm and wet

**2.** Draw a tree in the fall. Show the wind blowing the leaves. Color the leaves different colors.

Name _____

Daily Science

Big Idea 4

WEEK 4

Day 5

*Weekly Question*

# Why do some trees lose their leaves in the fall?

**1.** Read each question. Fill in the bubble next to the correct word.

What season comes right after summer?

Ⓐ spring Ⓑ winter Ⓒ autumn

What is the name for a small wind?

Ⓐ gust Ⓑ breeze Ⓒ fall

What do you get when cool and warm air mix?

Ⓐ leaves Ⓑ sunlight Ⓒ wind

**2.** Read each sentence. Put a check mark in front of the sentences that tell why trees lose their leaves in the fall.

___ The weather gets cooler.

___ Animals eat all the leaves.

___ The wind blows leaves off trees.

___ People take the leaves because they are pretty.

___ There is less sunlight for leaves.

Name _____


Unit Review

*Comprehension*

# Seasons and Weather

Read each question. Fill in the bubble next to the correct answer.

**1.** Which season is the hottest?

Ⓐ winter
Ⓑ spring
Ⓒ summer
Ⓓ fall

**2.** Which season is the coldest?

Ⓐ winter
Ⓑ spring
Ⓒ summer
Ⓓ fall

**3.** When do trees drop their leaves?

Ⓐ winter
Ⓑ spring
Ⓒ summer
Ⓓ fall

**4.** Which season has the most new flowers?

Ⓐ winter
Ⓑ spring
Ⓒ summer
Ⓓ fall

Name _____

Unit Review

*Vocabulary*

# Word Riddles


Read each riddle. Circle the correct answer.

**1.** I am a season that brings warm weather, rain, and flowers.

spring breeze bloom fall

**2.** I am a tool that helps you know how hot it is.

summer thermometer flower gust

**3.** I am the coldest season, and sometimes I bring snow.

wind winter temperature rain

**4.** I am the line that runs from Earth's top to bottom.

icicle season axis orbit

**5.** I am the season that happens when Earth tilts toward the sun.

winter summer autumn spring

Name _____

Unit Review

*Visual Literacy*

# The Changing Seasons

Daily Science Big Idea 4 WEEK 5

Look at the chart. Write the name of each season in the correct order. Then draw how a tree looks during that season.

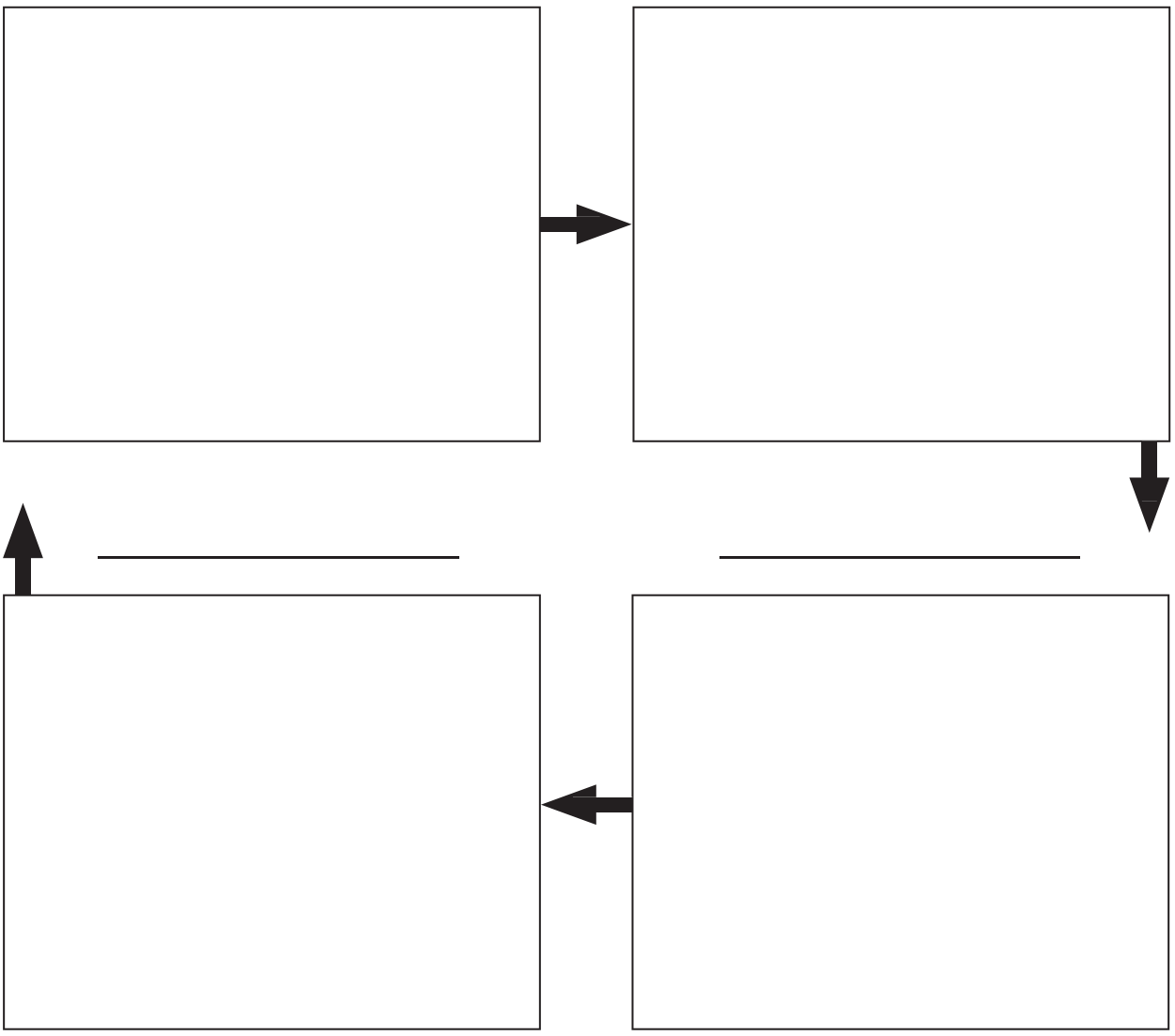
winter spring summer fall

winter _____

_____

_____

_____



Name _____

Daily Science
Big Idea 4
WEEK 5

Unit Review

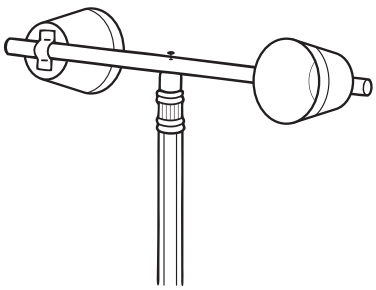
*Hands-on Activity*

# Measure the Wind!

You cannot see the wind. But you can see it move things. Make a wind gauge. See if the wind is moving fast, slow, or not at all.

## What You Need

- unsharpened pencil
- 2 small paper cups
- drinking straw
- pin and tape



1. Tape the bottom of each cup to the ends of the straw. Make the cups face in different directions.
2. Ask an adult to poke the pin through the middle of the straw and into the pencil eraser. Make sure the straw will turn.
3. Hold your wind gauge outside. Check at different times of day. Is it spinning fast, slow, or not at all?

## What Did You Discover?

What makes the wind gauge spin? _____

What does it mean if the wind gauge is still?

_____

What does it mean if the wind gauge spins fast?

_____


# Objects can be solid, liquid, or gas.

**Key Concepts**
Solids, Liquids, and Gases

**National Standard**
(a) Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. (b) Materials exist in different states—solids, liquids, and gases.

First-grade students realize that the world we live in is filled with "stuff." In this unit, they will learn the basics behind what stuff is made of. This Big Idea will introduce students to three forms of matter and their basic properties, including:

- the properties of a solid;
- the properties of a liquid;
- the properties of a gas; and
- how temperature affects matter.

## Teacher Background

Everything everywhere is made up of solids, liquids, gases, or a combination of these things. Some of these things are easily identifiable. Solids, for example, can be measured, weighed, and described. Liquids and gases also have physical properties, but it is more difficult to describe them.

All matter has mass, which refers to the amount of space it takes up. This is different from weight, which refers to the pull of gravity. On Earth, the measurement for mass and weight are the same, but they would be different on the moon or on Jupiter or in space. A person's mass would never change, but his or her weight would change dramatically. So that students are not confused, it is best to use the term *mass* and avoid *weight* altogether during this unit.

**For specific background information on each week's concepts, refer to the notes on pp. 128, 134, 140, and 146.**

## Unit Overview

### WEEK 1: Why can't we walk through walls?

**Connection to the Big Idea:** Students learn that everything on Earth is some form of matter. They begin by defining what makes something such as a wall a solid, and then learn the basic properties of a solid.

**Content Vocabulary:** *mass, matter, mixture, shape, solid*

### WEEK 2: Why does water splash?

**Connection to the Big Idea:** Students identify and define what a liquid is. They learn that liquids are matter, but, unlike solids, have no shape and will flow if uncontained. Students compare a liquid to a solid and understand why having no shape makes a liquid splash, drip, or spray.

**Content Vocabulary:** *flows, liquid, mass, splash*

### WEEK 3: Why do balloons float in the air?

**Connection to the Big Idea:** Students continue their thinking about matter and are introduced to gas as a form of matter. They learn that gas has mass, but it is hard to see and does not keep its shape. They also learn that gases have less mass than liquids or solids, and that some gases are lighter than other gases, which is why helium balloons float.

**Content Vocabulary:** *gas, mass*

### WEEK 4: Why does ice melt?

**Connection to the Big Idea:** Students learn that ice is the solid form of water. They describe its physical properties and then learn that when it gets warm, it changes from solid to liquid. They also consider other things that heat melts. Then they learn that heat can also change some liquids to gases, and that water in its gas form is steam.

**Content Vocabulary:** *heat, ice, liquid, melts, solid, steam*

### WEEK 5: Unit Review

You may choose to do these activities to review concepts about solids, liquids, and gases.

**p. 152: Comprehension** Students answer multiple-choice questions about key concepts in the unit.

**p. 153: Vocabulary** Students match words to their definitions.

**p. 154: Visual Literacy** Students compare pictures to categorize states of matter.

**p. 155: Hands-on Activity** Students experiment with water by freeing a marble from an ice cube. You will need to make ice cubes with marbles inside of them prior to the activity. See the student page for materials and instructions. If students have trouble figuring out how to melt the ice without touching it, you might suggest ways they can try, such as swirling the cup or holding their hands around the cup.


*Objects can be solid, liquid, or gas.*

# Week 1

# Why can't we walk through walls?

Students who have watched a science fiction or fantasy show may have seen a character walk through walls. But most young students know that this is just pretend. In reality, it's impossible for one solid to pass through another. After learning the definition of a solid—matter that keeps its own shape—students learn that solids can be combined in a mixture, but they keep their shape and can be separated.

## Day One

**Vocabulary:** *matter, solid*

**Materials:** examples of solids (crayons, books, blocks, etc.)

Distribute page 129 and read the introduction aloud. Show students examples of solids and demonstrate how they keep their shape, even when touched or moved. Have students complete the first activity. Then read aloud the words in the word box for the second activity, and model filling in the first sentence. Have students complete the remaining sentences independently.

## Day Two

**Vocabulary:** *mass, shape*

**Materials:** scale (optional)

Distribute page 130 and read the introduction aloud. Say: **We describe a solid by talking about its mass and what it looks like.** Pick an object in the room and describe its color and shape. If you have a scale, use it to show students how to measure mass. For the first activity, discuss why a book has more mass than a pencil and a cat has more mass than a mouse. (the book and cat are bigger, have more matter) Have students complete activities 2 and 3 independently.

## Day Three

**Vocabulary:** *mixture*

**Materials:** a mixture of objects (blocks, pens, pencils, crayons)

Distribute page 131 and read the introduction aloud. Show students your mixture of objects and demonstrate separating and recombining them. Then guide students through the first activity. For the second activity, point to a toy on the left and model finding the same picture on the right. Then have students complete the activity.

## Day Four

Distribute page 132 and read the introduction aloud. For activity 1, read the instructions and the words in the box aloud. Then read each sentence, having students call out the rhyming word. After students have written the words, read the completed rhyme as a group. For activity 2, read each sentence aloud and have students circle their answers.

## Day Five

Tell students they are going to review what they've learned about solids. Distribute page 133 and have students complete the activities. Go over the answers together.

Name _____

Daily Science

Big Idea 5

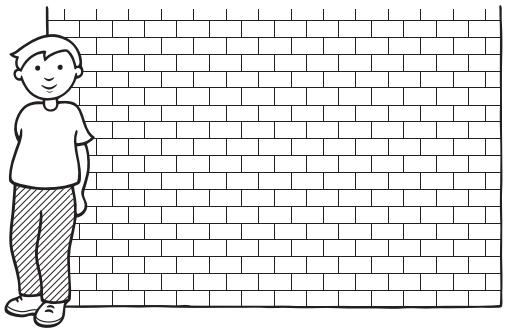
WEEK 1

Day 1

*Weekly Question*

# Why can't we walk through walls?

Everything in the world is made of **matter**.
A **solid** is a kind of matter that keeps its shape.
A wall is a solid.
So is a person.

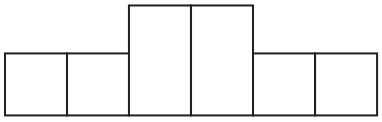


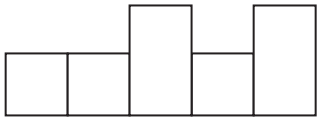
**Vocabulary**

**matter**
*everything that takes up space*

**solid**
*matter that keeps its shape and size*

**1.** Complete the sentences. Write the words.

Everything is made of  .

One kind of matter is a  .

**2.** Complete the sentences. Use the words in the box.

A _____ is a solid.

A _____ is a solid.

A _____ is a solid.

**ball**
**block**
**pen**

Name _____

Daily Science

Big Idea 5

WEEK 1

Day 2

*Weekly Question*

# Why can't we walk through walls?

**Mass** is how much matter something is made of. You can measure the mass of a solid. You can also describe the **shape** of a solid.

**Vocabulary**

**mass**
*the amount of matter something has*

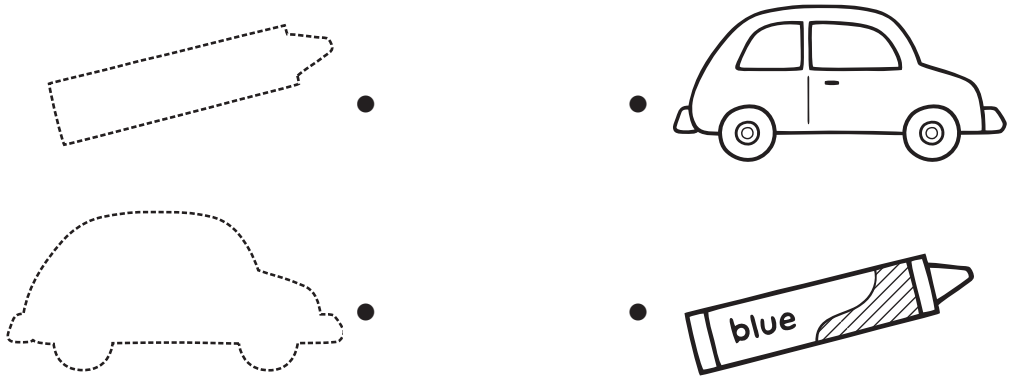
**shape**
*the form or outline of an object*

**1.** Complete each sentence. Write the word.

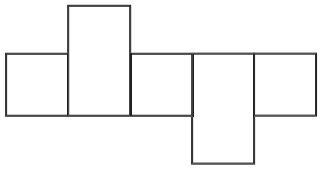
A book has more ☐☐☐☐ than a pencil.

A cat has more ☐☐☐☐ than a mouse.

**2.** Trace each shape. Draw a line to the solid it matches.




**3.** Complete the sentence. Write the word.

Every solid has a  .

Name _____

Daily Science

Big Idea 5

WEEK 1

Day 3

*Weekly Question*

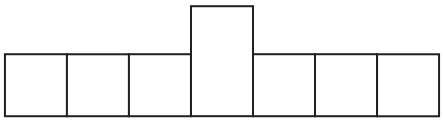
# Why can't we walk through walls?

You can mix solids together. This makes a **mixture**. The solids in a mixture do not change shape. They just get mixed up. They can still be sorted out of the mixture.

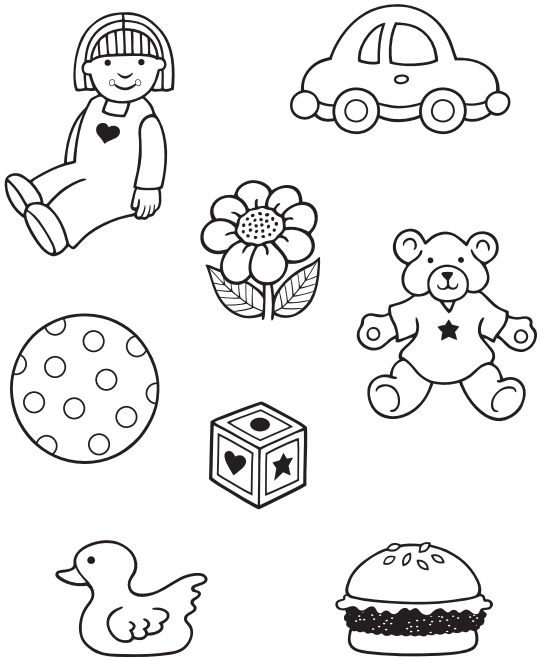
**Vocabulary**

**mixture**
*solids mixed together*

**1.** Complete the sentence. Write the word.

A  is made of solids that are mixed together.

**2.** Look at the mixture of toys on the left. Circle the things on the right that are part of the mixture.



Name _____

Daily Science
Big Idea 5
WEEK 1

Day 4

*Weekly Question*

# Why can't we walk through walls?

A person and a wall are both solid. A solid can't change its shape. If you tried to walk through a wall, you would hurt yourself!

**1.** Complete the rhyme. Write the words from the box.

**wall** **nose**

You can walk through a hall,

but not through a _____.

You would stub your toes

and bump your _____!

**2.** Read each sentence. Circle **yes** or **no**.

You can walk through an open door. **yes** **no**

You can walk through a closed door. **yes** **no**

Name _____

Daily Science

Big Idea 5

WEEK 1

Day 5

*Weekly Question*

# Why can't we walk through walls?

**1.** Complete each sentence. Fill in the bubble next to the correct word.

A brick is a _____.

Ⓐ wall Ⓑ solid Ⓒ matter

Everything is made of _____.

Ⓐ solids Ⓑ mixtures Ⓒ matter

An elephant has more _____ than a puppy.

Ⓐ mass Ⓑ shape Ⓒ solid

Because a solid keeps its _____,
a person cannot walk through a wall.

Ⓐ mixture Ⓑ shape Ⓒ mass

**2.** Draw a solid in your classroom. Write its name.

_____
(name of solid)


*Objects can be solid, liquid, or gas.*

# Week 2

# Why does water splash?

Liquids are a form of matter. One of the main differences between liquids and solids is that liquids flow, so they don't hold their shape. Instead, liquids will take the shape of their container. Also, most liquids cannot be made into mixtures that can be sorted out like solids can. When liquids are mixed with solids, the solids often dissolve, such as when salt dissolves into water to form a solution. Liquids can also dissolve into one another, or form a suspension, such as oil and vinegar. A suspension can be sorted if it is allowed to settle.

## Day One

**Vocabulary:** *flows, liquid*

Distribute page 135 and read the introduction aloud. Have students name some examples of a liquid. (water, juice, milk, and so on) Ask: **What does *flow* mean?** (run, move, spill) **What flows?** (rivers, water from a faucet, and so on) Have students complete the activities, and assist as needed.

## Day Two

**Vocabulary:** *mass*

**Materials:** colored water or juice, clear cup, bottle, or bowl (optional)

Distribute page 136 and read the introduction aloud. If you choose, demonstrate how liquids take the shape of a container by pouring the colored water or juice into the different clear containers and having students describe the shape of the liquids. Have students complete the first activity independently. For the discussion activity, review the properties of solids and liquids. Then have students discuss the answers to the questions in pairs or as a group.

## Day Three

**Materials:** cup of water (optional)

If you choose, demonstrate how a liquid flows by spilling a cup of water onto a table. Ask: **What happens to water when you spill it out of a cup?** (it makes a puddle; runs onto the table/floor) **Does the spill always look the same?** (no) Distribute page 137 and read the introduction. Have students complete the first activity. For the second activity, read each sentence aloud and have students circle their answers.

## Day Four

**Vocabulary:** *splash*

Distribute page 138 and read the introduction aloud. Ask: **How is splashing water like spilling it? How is it different?** (both flow, both change shape; splashing breaks liquids apart, spilled liquids stay together) Have students complete the activities, and assist as needed.

## Day Five

Tell students they will review everything they've learned about liquids. Distribute page 139 and have students complete the activities. Review the answers together.

Name _____

Day 1

*Weekly Question*

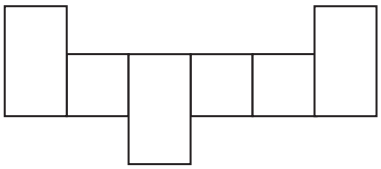
# Why does water splash?

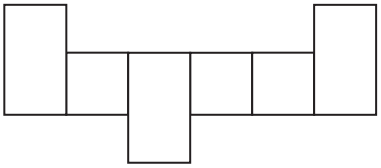
Daily Science Big Idea 5

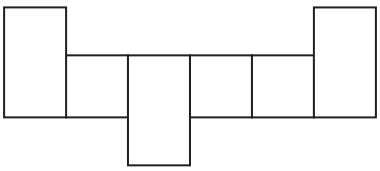
WEEK 2

Water is a **liquid**. A liquid is a kind of matter. When you pour a liquid, it **flows**.

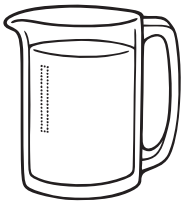
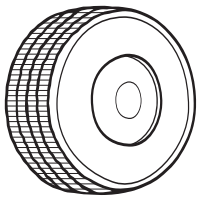
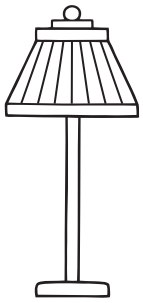
**1.** Complete each sentence. Write the word.

Matter that flows is called a  .

Water is a kind of  .

You can pour a  .

**2.** Look at the pictures. Circle the things that show liquids.


**Vocabulary**

**flows**
*moves or spreads*

**liquid**
*matter that flows and takes the shape of its container*

Name _____

Day 2

*Weekly Question*

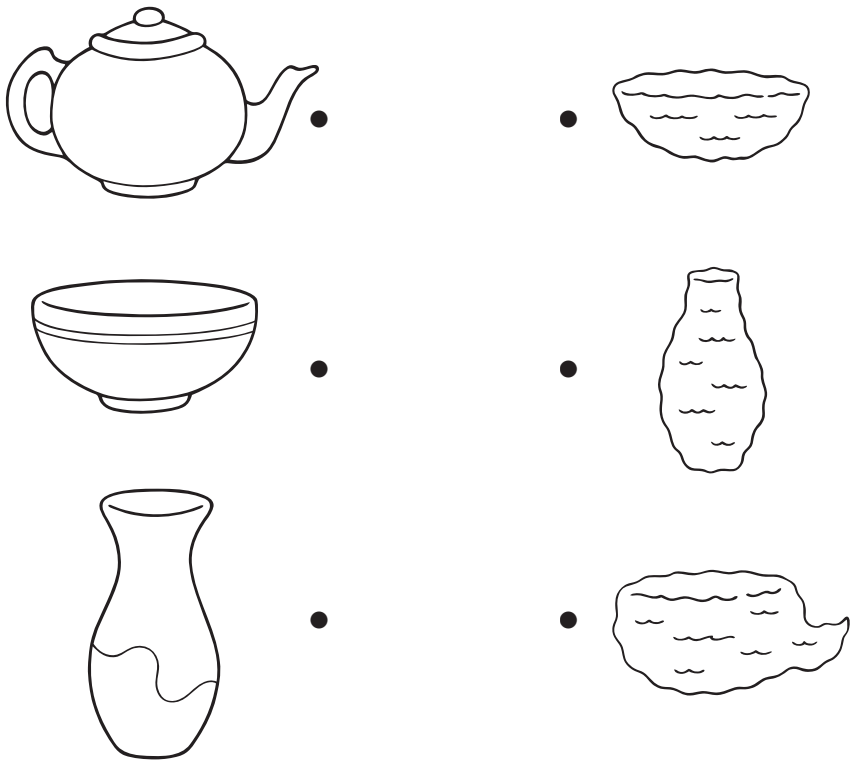
# Why does water splash?

Daily Science Big Idea 5

WEEK 2

A liquid has **mass**, but it does not have a shape. It forms the shape of the container it is in. If you pour water into a cup, the water becomes the shape of the cup.

Look at each container. Draw a line to the shape of the liquid that is inside it.



**Talk!**

How are a solid and a liquid the same? How are they different? Tell your partner.

**Vocabulary**

**mass**
*the amount of matter something has*

Name _____

Daily Science
Big Idea 5
WEEK 2

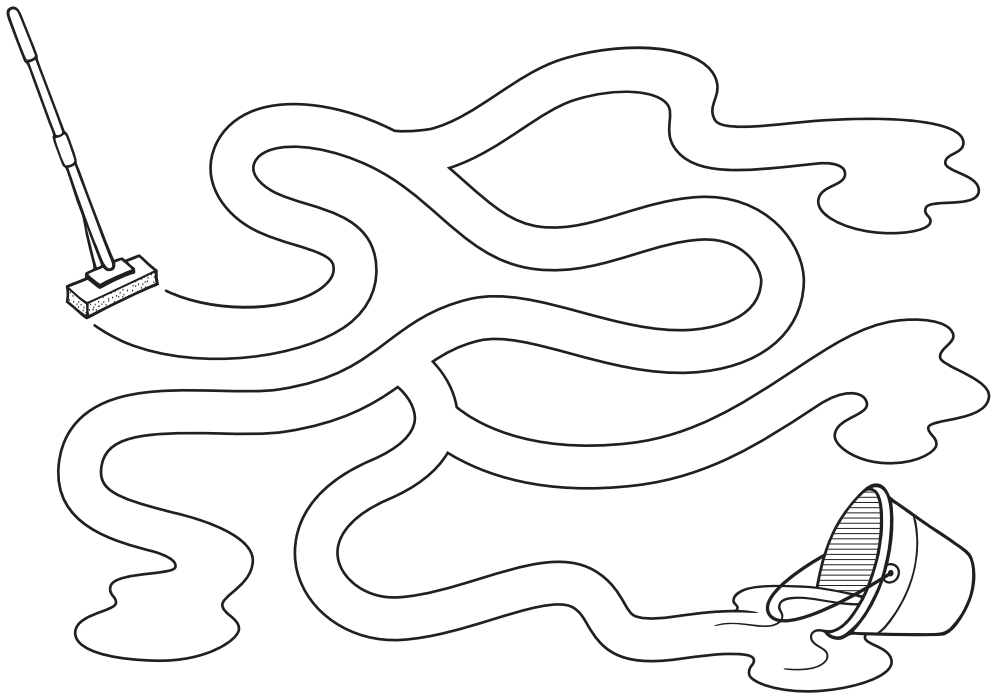
Day 3

*Weekly Question*

# Why does water splash?

When a liquid spills, it spreads out. It flows in different directions. It does not stop until it hits something.

**1.** Mop up as much water as you can!
Draw a line from the mop to the pail.



**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A liquid spreads out when it spills. | yes | no |
| A liquid flows in only one direction. | yes | no |
| A liquid stops moving when it hits something. | yes | no |

Name _____

Daily Science
Big Idea 5
WEEK 2

Day 4

*Weekly Question*

# Why does water splash?

When you drop a ball, it bounces. When you drop a book, it lands with a thud. That's because solids keep their shape. But when you drop a liquid, it **splashes**, or spreads apart.

**Vocabulary**

**splash**
*to spread apart suddenly*

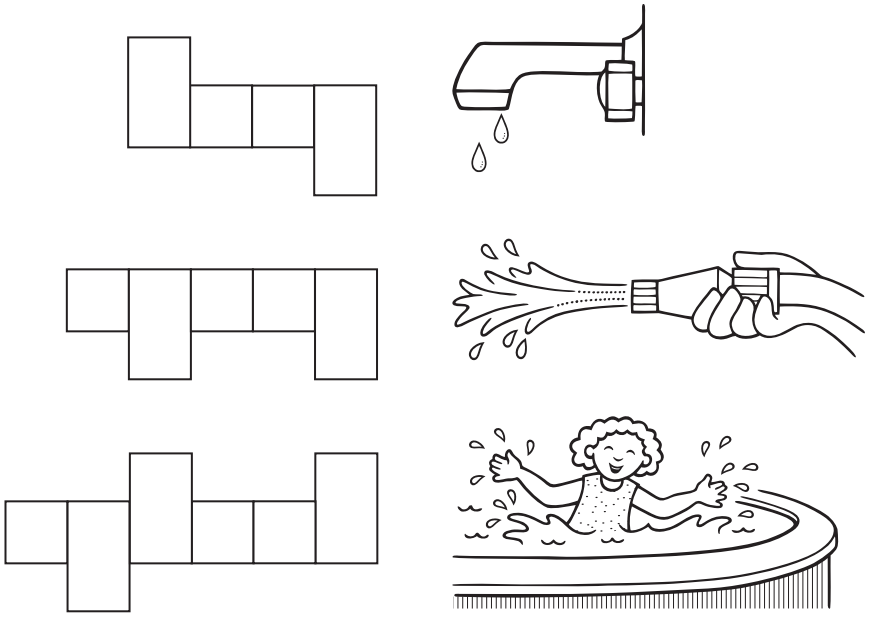
1. Look at the objects. Imagine that they all hit the ground. Cross out the ones that keep their shape. Circle the ones that splash.

2. Tell about each picture. Write a word from the box.

splash

drip

spray



Name _____

Daily Science
Big Idea 5
WEEK 2

Day 5

*Weekly Question*

# Why does water splash?

**1.** Complete each sentence. Circle the correct word.

You can pour a _____.

solid mass liquid

Liquids do <u>not</u> have their own _____.

color shape solid

Liquids and solids are both _____.

matter water shapes

Liquid in a cup will be shaped like a _____.

bowl cup spill

**2.** Complete each sentence. Use the words in the box.

**flow liquid shape**

Water is a _____.

It does not keep its _____.

It likes to _____. This is why water splashes!


# Week 3

# Why do balloons float in the air?

*Objects can be solid, liquid, or gas.*

Balloons contain air, which is a gas. Gas is another form of matter. Gases are typically the hardest form of matter for young students to understand because gases have few observable properties. But gases, like solids and liquids, have mass and take up space. And like liquids, a gas takes the shape of its container. Water vapor is the most familiar and easily understandable form of gas for most students to comprehend.

## Day One

**Vocabulary:** *gas*

Distribute page 141 and read the introduction aloud. Say: **You cannot see it, but a gas is a kind of matter just like a liquid and a solid. Gas is all around us.** Guide students through the activities.

## Day Two

**Materials:** balloon (optional)

Distribute page 142 and read the introduction aloud. Say: **A gas is hard for us to study because we can't see it by itself. But we know it is there because we can see it when it takes the shape of its container.** If you have a balloon, blow it up for students; otherwise point out the picture on the page and say: **We know the gas is inside the balloon because of its shape.** Guide students through the first activity, explaining that each picture on the right shows a gas filling up a space. Then have students complete the second activity.

## Day Three

**Vocabulary:** *mass*

**Materials:** an inflated balloon, a water balloon, and a scale (optional)

Distribute page 143 and read the introduction aloud. Review the concept of mass. If you have balloons and a scale, use them to demonstrate how an air balloon has less mass than a water balloon. Otherwise, point out the picture of the scale on the page and say: **A balloon filled with air has less mass than a balloon filled with water.** Have students complete the first activity. For the second activity, read the labels under each pair of pictures aloud. Then have students circle the objects with less mass.

## Day Four

**Materials:** helium balloon

Distribute page 144 and read the introduction aloud. Show students the helium balloon and explain that the gas inside the balloon has mass, but the mass is less than the air around the balloon. This is what causes it to float. Distribute crayons and have students complete the first activity. For activity 2, read each sentence aloud and have students write the words.

## Day Five

Tell students they will review everything they've learned about gases. Distribute page 145 and have students complete the activities. Go over the answers together.

Name _____

Daily Science

Big Idea 5

WEEK 3

Day 1

*Weekly Question*

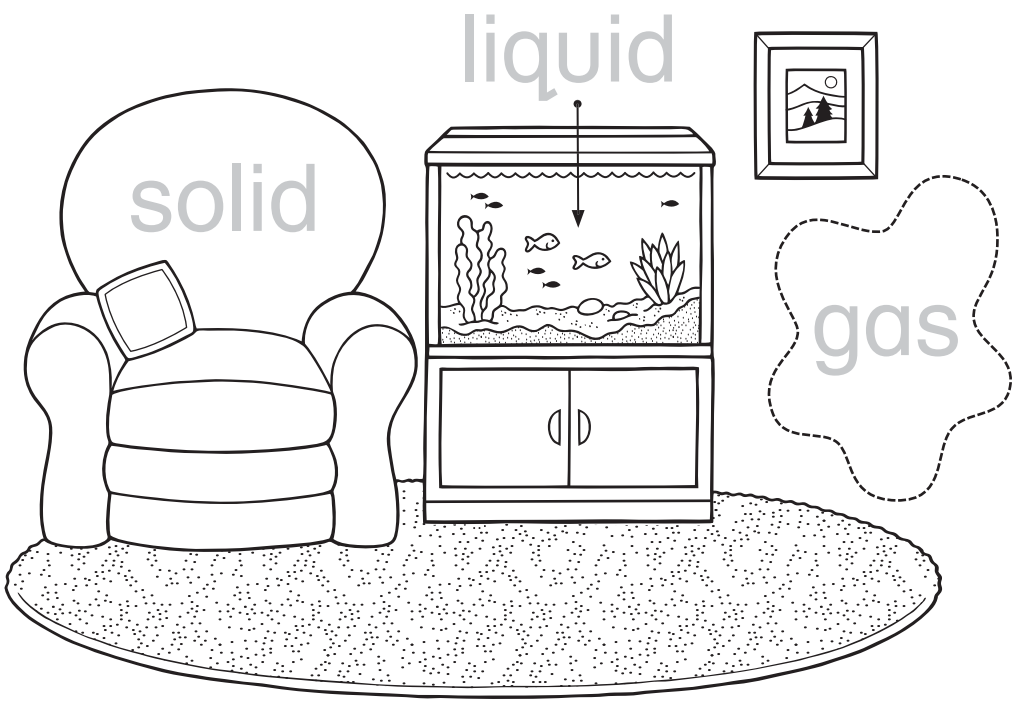
# Why do balloons float in the air?

Balloons have air in them. Air is a **gas**. A gas is a kind of matter. It has mass and takes up space. You can't see air. But you can feel it when it moves.

**Vocabulary**

**gas**
*matter that has little mass and takes the shape of its container*

**1.** Look at the picture. Trace the words.




**2.** Complete each sentence. Circle the word.

| | | | |
|---|---|---|---|
| Air is a _____. | solid | liquid | gas |
| You can't see _____. | air | liquid | matter |
| A gas has _____. | liquid | mass | balloons |

Name _____

Daily Science

Big Idea 5

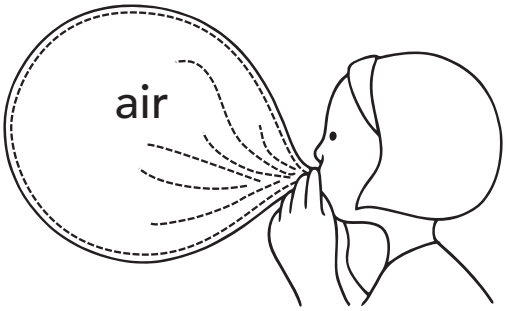
WEEK 3

Day 2

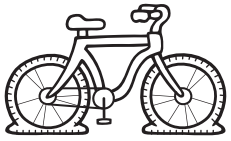
*Weekly Question*

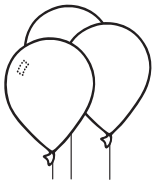
# Why do balloons float in the air?

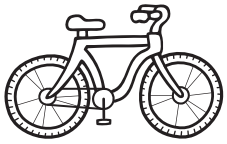
A gas has no shape. It takes the shape of the container it is in. When you blow up a balloon, you are filling it with air. The air forms the shape of the balloon.




**1.** Match each object on the left to the picture that shows it filled with air.







**2.** Complete the sentences.
Write the words from the box.

| fills | air |
|---|---|

Andi's bike has a flat tire. It needs _____.

Andi _____ the tire with air.

Name _____

Daily Science

Big Idea 5

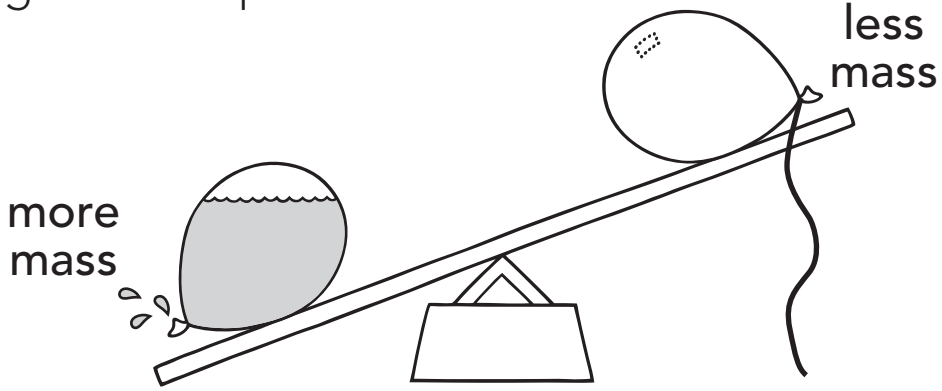
WEEK 3

Day 3

*Weekly Question*

# Why do balloons float in the air?

A gas has less **mass** than a liquid or solid. So, things full of gas have less mass than things full of liquids or solids.




**Vocabulary**

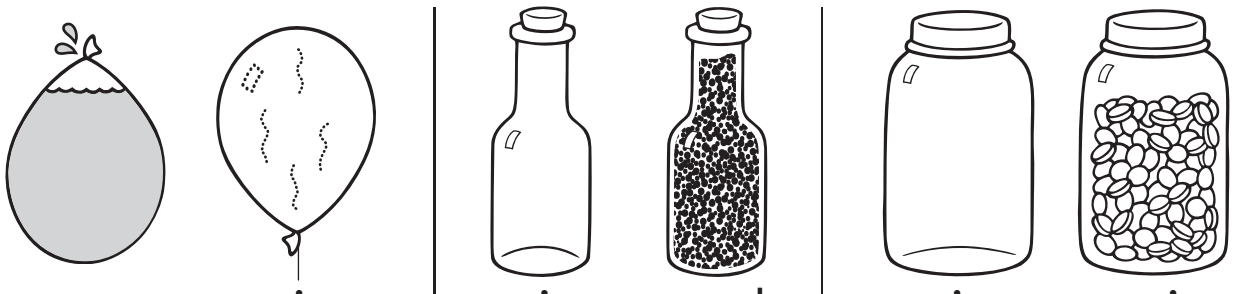
**mass**
*the amount of matter something has*

**1.** Complete each sentence. Write the word.

A gas has less ☐☐☐☐ than a liquid.

A balloon full of air has less ☐☐☐☐ than a balloon full of water.

**2.** Look at each pair. Circle the object with **less** mass.



Name _____

Daily Science
Big Idea 5
WEEK 3

Day 4

*Weekly Question*

# Why do balloons float in the air?

Not all gases have the same mass. One kind of gas is called **helium**. It has less mass than air. Some balloons have helium in them. They are lighter than air. These balloons will float away if you don't hold on to them!

**1.** Circle the balloons that have helium in them. Color the picture.

**2.** Complete each sentence. Use the words in the box.

**gas** **mass**

Helium is a ☐☐☐. Air is a ☐☐☐, too.

Helium and air both have ☐☐☐☐.

But helium has less ☐☐☐☐ than air does.

Name _____

Daily Science
Big Idea 5
WEEK 3

Day 5

*Weekly Question*

# Why do balloons float in the air?

**1.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Air is a kind of matter. | yes | no |
| A gas has its own shape. | yes | no |
| A gas has more mass than a liquid. | yes | no |

**2.** Complete each sentence. Use the words in the box.

**float** **gas** **mass**

The air we breathe is a _____.

Some gases have less _____ than air does.

A balloon filled with these gases will _____.

**3.** Draw a picture.
Put balloons in it.


# Week 4

# Why does ice melt?

*Objects can be solid, liquid, or gas.*

As students begin to learn how to describe different kinds of matter, they will also learn how energy changes matter. The most basic and common change is through heat. Most solids, when given enough heat, will turn into liquids. Many liquids will turn into gas. Water is the easiest compound to use to demonstrate these changes. When ice is heated above 32 degrees Fahrenheit, it turns into water. When water is heated above 212 degrees Fahrenheit, it becomes steam.

## Day One

**Vocabulary:** *ice, solid*

Distribute page 147 and read the introduction aloud. Ask students to describe ice, eliciting that it is clear, cold, slippery, and hard. Point out these words in the first activity. Then have students complete the first and second activities. For the third activity, remind students that snow is a form of ice before they complete the activity.

## Day Two

**Vocabulary:** *liquid, melts*

Ask students if they have ever left a drink out on a warm day. Ask: **What happened?** (The drink got warm, the ice melted, etc.) Distribute page 148 and read the introduction aloud. Then have students complete the first activity. For the second activity, read the instructions aloud. Model matching the first picture before having students complete the activity.

## Day Three

**Vocabulary:** *heat*

Distribute page 149 and read the introduction. Have students look at the pictures in activity 1. Then brainstorm additional examples of heat turning a solid into a liquid, such as a chocolate bar melting in your pocket, icicles dripping in the sun, butter melting on toast, etc. Have students complete the first activity. Then read the riddle in activity 2 aloud. After students have written their answer, have everyone reread the riddle together.

## Day Four

**Vocabulary:** *steam*

Ask students if they have seen someone in their family heat water on the stove. Ask: **What happens?** (It bubbles, it gets really hot, steam comes off the top, etc.) Distribute page 150 and read the introduction aloud. Say: **Heat turns a solid into a liquid, and heat can also turn a liquid into a gas.** Have students complete the activities, and assist them as needed.

## Day Five

Tell students they are going to review everything they've learned about heat and different kinds of matter. Distribute page 151 and have students complete the activities. Go over the answers together.

Name _____

Day 1

*Weekly Question*

# Why does ice melt?

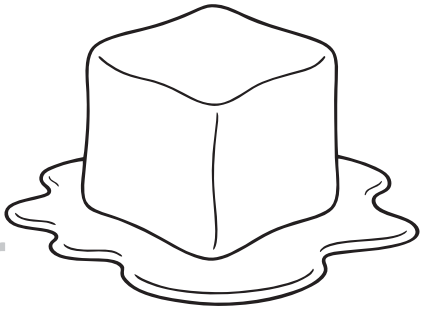
Daily Science Big Idea 5

WEEK 4

When water freezes, it turns into **ice**. It becomes a **solid**. It keeps its shape. Ice can be thick, like an iceberg. It can be tiny, like a snowflake.

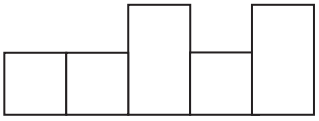
**1.** What does ice look like? How does it feel? Trace the words that tell about ice.

cold hard

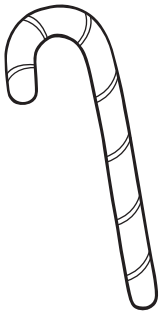


clear slippery

**2.** Complete the sentence. Write the word.

Ice is the  form of water.

**3.** Circle the things made of ice.



**Vocabulary**

**ice**
*frozen water*

**solid**
*matter that keeps its shape and size*

Name _____

Day 2

*Weekly Question*

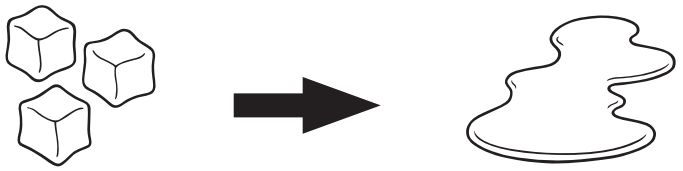
# Why does ice melt?

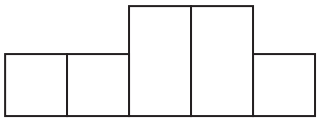
Daily Science Big Idea 5

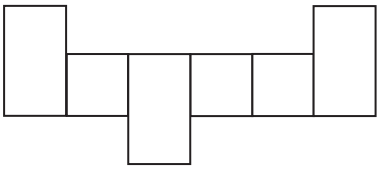
WEEK 4

When ice warms up, something happens. It **melts**. It turns into a **liquid**, and it loses its shape.

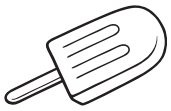
**1.** Look at the picture. Then write the words.



When ice  ,

it becomes a  .

**2.** Look at the pictures. Match each picture to what happens after the ice melts.



**Vocabulary**

**liquid**
*matter that flows and takes the shape of its container*

**melts**
*changes from a solid to a liquid by heating*

Name _____

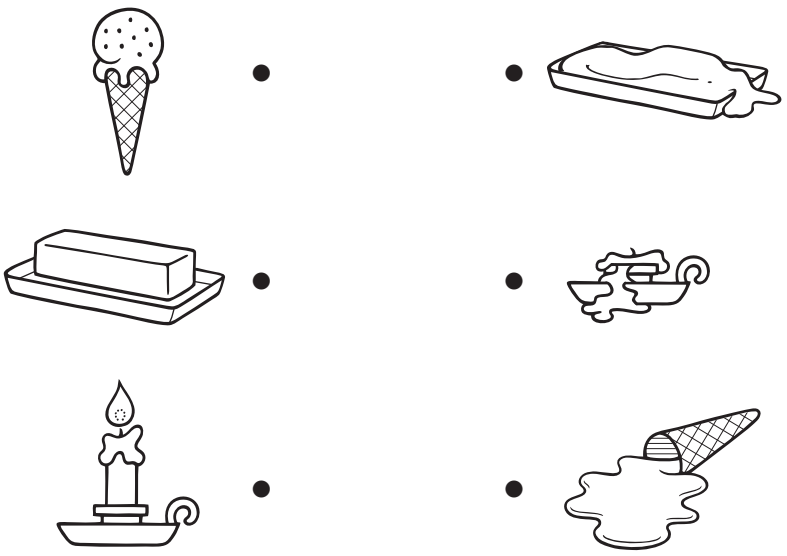
Day 3

*Weekly Question*

# Why does ice melt?

**Heat** makes ice melt. Heat makes some other solids turn into liquids, too.

**1.** Look at each object on the left. What would it look like if it melted? Match the pictures.



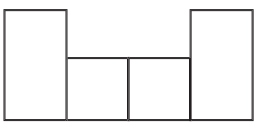
**2.** Answer the riddle. Write the word.

I can turn ice cream into soup.

I can make a tall candle short.

I can turn butter into a puddle.

What am I?



Daily Science

Big Idea 5

WEEK 4

**Vocabulary**

**heat**
*a form of energy we can feel*

Name _____

Day 4

*Weekly Question*

# Why does ice melt?

Daily Science Big Idea 5

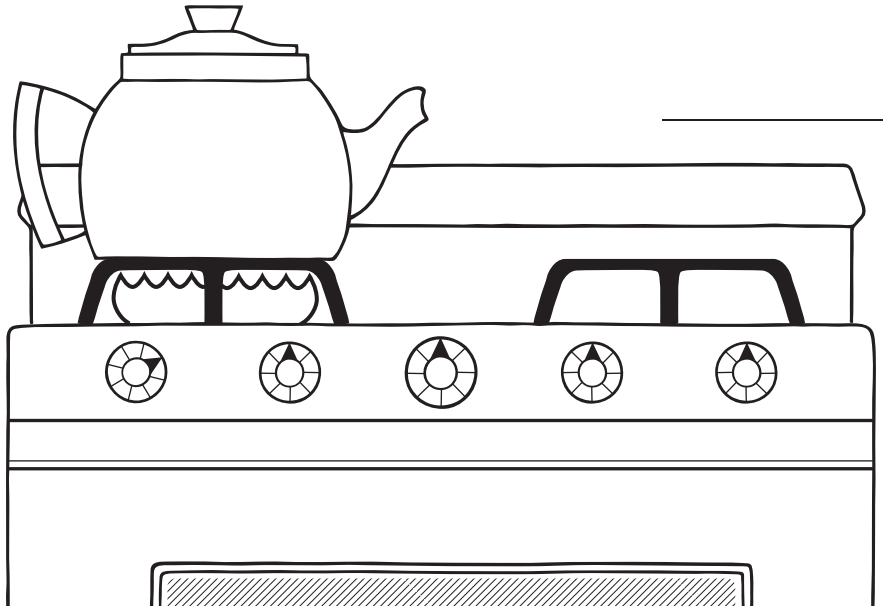
WEEK 4

Ice is the solid form of water. The gas form of water is **steam**. When water gets very hot, it boils. The heat turns the water into steam. You can see the steam rising from a pot of boiling water.

**Vocabulary**

**steam**
*the gas form of water*

1. Color the fire red. Draw the steam coming out of the kettle. Then write its name.



_____

2. Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| The solid form of water is steam. | yes | no |
| Heat turns water into steam. | yes | no |
| You can see steam. | yes | no |

Name _____

Daily Science
Big Idea 5
WEEK 4

Day 5

*Weekly Question*

# Why does ice melt?

**1.** Draw a line to match each form of water to the type of matter it is.

| | |
|---|---|
| water • | • solid |
| steam • | • liquid |
| ice • | • gas |

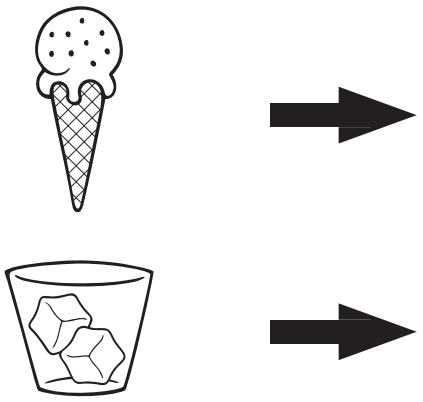
**2.** Answer the questions. Write the words.

What makes ice melt? _____

What turns water into steam? _____

What form of matter is steam? _____

**3.** Look at the pictures below. Draw what happens to them when they get hot.



Name _____


Unit Review

*Comprehension*

# Solids, Liquids, and Gases

Read each sentence. Fill in the bubble next to the correct answer.

**1.** What does a solid do?

Ⓐ It keeps its shape.

Ⓑ It flows.

Ⓒ It fills a container.

**2.** Heat turns liquid water into a _____.

Ⓐ solid

Ⓑ liquid

Ⓒ gas

**3.** Which of these have mass?

Ⓐ liquid

Ⓑ solid

Ⓒ gas

Ⓓ all of these

**4.** What do you get when you mix solids?

Ⓐ a liquid

Ⓑ a mixture

Ⓒ a gas

Ⓓ steam

Name _____

Unit Review

*Vocabulary*

# Match the Words


Draw lines to match the words to their meanings.

| | |
|---|---|
| mixture • | • frozen water |
| liquid • | • energy we can feel |
| matter • | • everything that takes up space |
| ice • | • the gas form of water |
| steam • | • matter that flows |
| heat • | • a mix of solids |
| gas • | • matter that keeps its shape and size |
| mass • | • the amount of matter something has |
| solid • | • to change a solid to a liquid by heating |
| shape • | • to spread apart suddenly |
| melt • | • the form or outline of an object |
| splash • | • matter that has little mass and takes the shape of its container |

Name _____

Unit Review

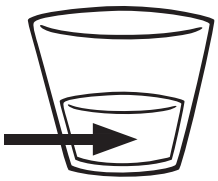
*Visual Literacy*

# What Do You See?

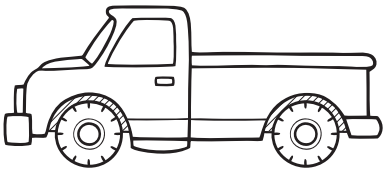
Daily Science Big Idea 5

WEEK 5

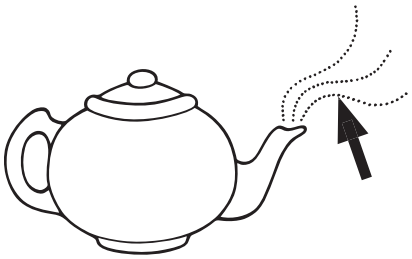
Look at each picture. Is it a **solid**, **liquid**, or **gas**? Circle the correct word.



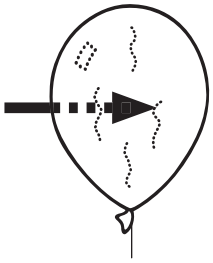
solid liquid gas



solid liquid gas

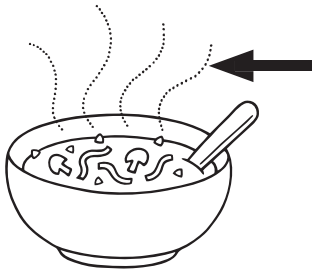


solid liquid gas

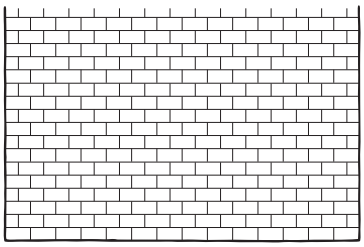


solid liquid gas

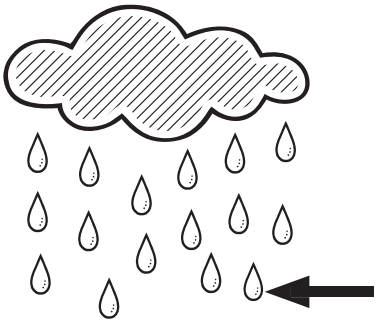
solid liquid gas



solid liquid gas



solid liquid gas



solid liquid gas

solid liquid gas

Name _____

Daily Science
Big Idea 5
WEEK 5

Unit Review

*Hands-on Activity*

# Ice Cube Race

**What You Need**

- ice cube trays
- plastic cups
- marbles

1. Have your teacher freeze a marble in each square of water in an ice cube tray.
2. Take an ice cube out of the tray. Put it in a cup.
3. Now try to melt the ice cube and free the marble. But you can't touch the marble or the ice cube!
4. Watch the clock to see how long it takes to free the marble. Race with a partner!

## What Did You Discover?

How long did it take you to free the marble?

_____

Who won the race? _____

What did you do to make the ice cube melt?

_____

_____

_____


An object's motion can be changed by using force. Pushing and pulling are types of forces.

**Key Concepts**
Force and Motion

**National Standard**
The position and motion of an object can be changed by pushing or pulling it. The extent of the change is related to the strength of the push or pull.

While studying this Big Idea, students will be introduced to the beginning concepts behind force and motion. They will learn about and discuss key points and definitions of:

- motion;
- force;
- the difference between *push* and *pull;* and
- gravity.

## Teacher Background

Although motion is a constant fact of life for children, few think of it in scientific terms. The way things move may seem automatic or magical to them, but it can be explained through basic concepts of force, direction, and speed.

Force is a push or a pull on an object. A push or pull on an object causes the object to change its motion. A force can be strong or weak. Some forces can be seen, such as kicking a ball or pulling a cart, while some forces, such as gravity, are constant and are observed indirectly.

Motion is the movement of objects from one location to another. It can be big or small, fast or slow. A big force will produce a big motion, while a small force will produce a small motion.

Speed measures how quickly an object moves from one place to another. While students will not calculate speed, they will understand that one thing can have a faster or a slower speed than another thing.

**For specific background information on each week's concepts, refer to the notes on pp. 158, 164, 170, and 176.**

## Unit Overview

### WEEK 1: Why do shopping carts have wheels?

**Connection to the Big Idea:** Students learn that force is a push or pull that can cause movement. They investigate different kinds of pushes and pulls and the force required to move things, and learn that wheels make it easier to push or pull something.

**Content Vocabulary:** *force, motion, pull, push, wheel*

### WEEK 2: Why does a ball go far when I kick it hard?

**Connection to the Big Idea:** Students consider how different kinds of force make things move different distances. They learn that a bigger force, such as a kick, will move the same object farther than a smaller force, such as a tap, will. They also learn that speed is how quickly one thing moves from one location to another.

**Content Vocabulary:** *distance, speed*

### WEEK 3: Why do cars have steering wheels?

**Connection to the Big Idea:** Students discover that moving objects travel along a path. They learn that force can change the direction of an object or stop the object completely. They also learn that there are common paths (straight, curved, and circular), and that steering wheels help cars change their paths as they are moving.

**Content Vocabulary:** *backward, force, forward, path*

### WEEK 4: Why do things fall down when you drop them?

**Connection to the Big Idea:** Students learn that gravity is a constant pull that affects everything on Earth. They learn that gravity pulls on all things equally, and that force, such as holding or lifting an object, will work against gravity to keep the object from falling.

**Content Vocabulary:** *gravity*

### WEEK 5: Unit Review

You may choose to do these activities to review concepts about force and motion.

**p. 182: Comprehension** Students answer multiple-choice questions about key concepts in the unit.

**p. 183: Vocabulary** Students match vocabulary words to their definitions.

**p. 184: Visual Literacy** Students identify the best captions for a series of pictures.

**p. 185: Hands-on Activity** Students record their own actions during recess and make observations about using pushes and pulls while playing. To conduct the activity, take students outside and demonstrate different pushes and pulls (walking, swinging, kicking a ball, and so on). When students have finished playing outside, list some of the things they did on the board. Discuss with students whether they used pushes or pulls, and help them fill in the chart on the student page.


# Week 1

# Why do shopping carts have wheels?

*An object's motion can be changed by using force. Pushing and pulling are types of forces.*

Students learn that pulling and pushing are forces. When a push or pull moves an object, it creates motion. Small, light things can be pushed or pulled with little force, while big, heavy things need more force to move them. This is a fairly intuitive concept for children, as is the concept that wheels help push or pull an object, such as a shopping cart, with less force.

## Day One

**Vocabulary:** *motion*

Distribute page 159 and read the introduction aloud. Demonstrate using motion, or help students find things in the classroom that are in motion. (hands on a clock, the class pet, and so on) Have students complete the first activity independently. For activity 2, read each sentence aloud and have students write the missing word. You may choose to pair students for the discussion activity or brainstorm answers as a group.

## Day Two

**Vocabulary:** *force, pull, push*

**Materials:** a block or other object you can push and pull easily

Distribute page 160 and read the introduction aloud. Demonstrate using force by pushing and pulling an object on a table or the floor. As you push the object, say: **I am using force to push this.** As you pull the object, say: **I am using force to pull this.** Invite volunteers to take turns pushing and pulling the object. Then guide students through the activities.

## Day Three

**Vocabulary:** *wheel*

**Materials:** two objects, one with wheels and one without, such as a toy car and an eraser

Distribute page 161 and read the introduction aloud. Show students the two objects and ask: **Which of these do you think is easier to push and pull?** (the car) **Why?** (It has wheels.) Read the riddle to students and have them write the word. (*wheel*) For activity 2, brainstorm with students some things that have wheels. (bike, car, bus, skateboard, and so on) Write the words on the board for students to copy.

## Day Four

Distribute page 162 and read the introduction aloud. Guide students through the first activity by asking them if each object needs a lot of force or a little force to move. For the second activity, read each sentence aloud and have students circle their answers.

## Day Five

Tell students they will review everything they've learned about motion. Distribute page 163 and have students complete the activities. Then go over the answers together.

Name _____

Daily Science

Big Idea 6

WEEK 1

Day 1

*Weekly Question*

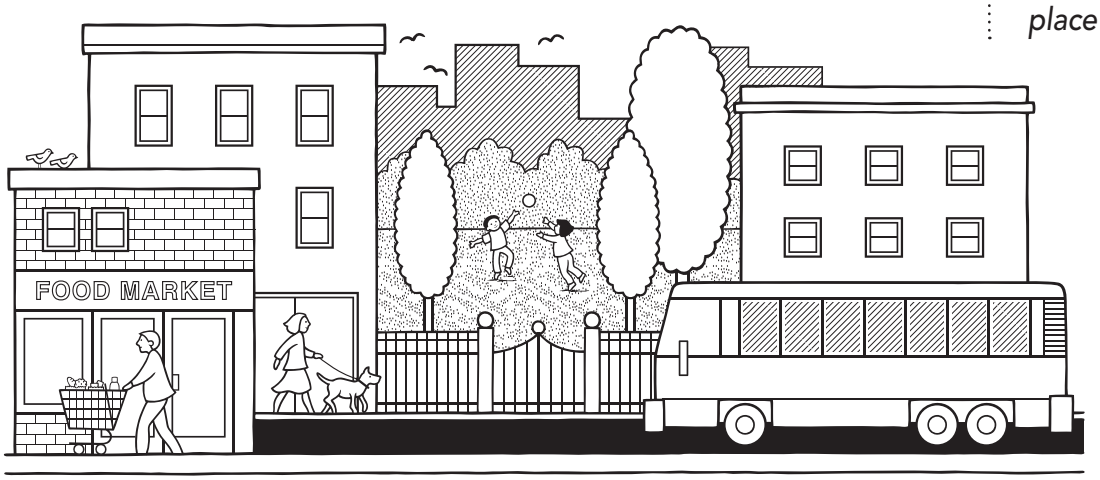
# Why do shopping carts have wheels?

As soon as you got out of bed today, you used **motion**. That means you moved. All kinds of things use motion.

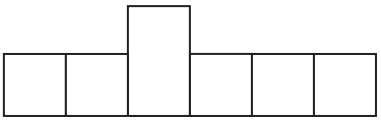
**Vocabulary**

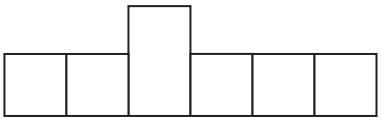
**motion**
*moving from one place to another*

**1.** Look at the picture. Circle the things in motion.




**2.** Complete each sentence. Write the word.

A car uses  to go down the road.

A person uses  to walk up stairs.

**Talk**

Think of some things you did today that used motion. Tell your partner.

Name _____

Daily Science
Big Idea 6
WEEK 1

Day 2

*Weekly Question*

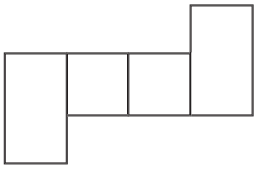
# Why do shopping carts have wheels?

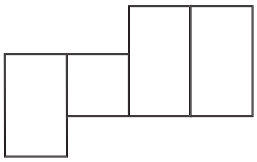
It takes **force** to move something. A force can be a **push** or a **pull**. You can push or pull a shopping cart.

**1.** Complete each sentence.
Use the words in the box.

**pull**

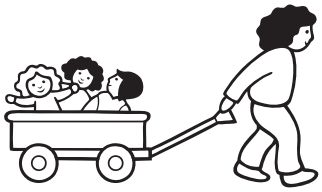
**push**

You  something to move it away from you.

You  something to bring it closer to you.

**2.** Look at each picture. Is it a **push** or a **pull**?
Write the word below the picture.

_____



_____

_____

**Vocabulary**

**force**
*something that makes an object move*

**pull**
*to bring an object closer*

**push**
*to move an object farther away*

Name _____

Daily Science
Big Idea 6
WEEK 1

Day 3

*Weekly Question*

# Why do shopping carts have wheels?

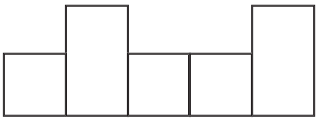
Imagine trying to move a shopping cart without wheels! A **wheel** makes it easier to push or pull something. You use less force to move something that has wheels.

**Vocabulary**

**wheel**
*a round object that rolls or turns*

**1.** Answer the riddle. Write the word.

I spin and spin.
I'm round like a pie.
Just try to stop me
When I roll by.
What am I?



**2.** What are some things that have wheels? Draw a picture of something that has wheels. Then write its name.

Name _____

Daily Science
Big Idea 6
WEEK 1

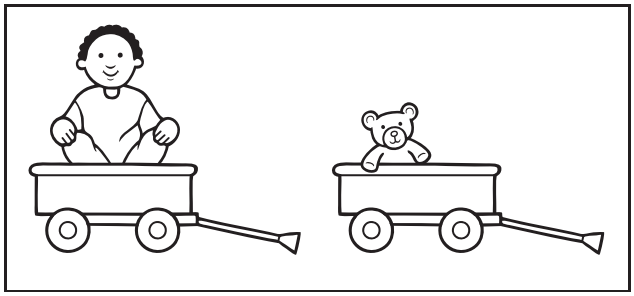
Day 4

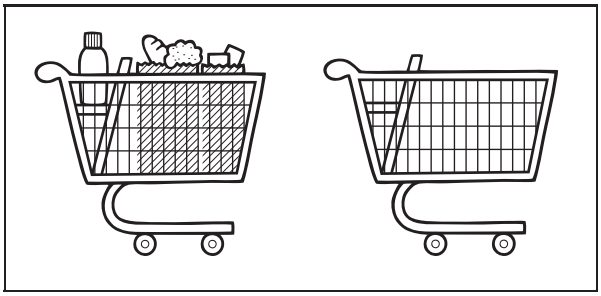
*Weekly Question*

# Why do shopping carts have wheels?

Big, heavy things need a lot of force to move them. Small, light things don't need as much force. A full shopping cart is harder to move than an empty shopping cart.

**1.** Look at each pair of pictures. Circle the object that needs more force to move.





**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A stick is easier to pull than a log. | yes | no |
| You need a lot of force to push a toy car. | yes | no |
| You need a little force to pull an empty cart. | yes | no |
| A marble needs a bigger push than a bowling ball. | yes | no |

Name _____

Daily Science

Big Idea 6

WEEK 1

Day 5

*Weekly Question*

# Why do shopping carts have wheels?

**1.** Complete each sentence. Circle the correct word.

A push and a pull are kinds of _____.

playing force wheels

A ball in _____ moves from one place to another.

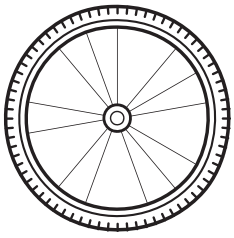
force motion push

A _____ makes it easier to move heavy things.

wheel rock stick

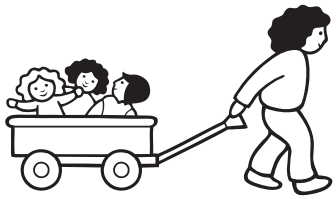
**2.** Write the name of each picture. Use the words in the box.

**pull push wheel**



_____

_____



_____


# Week 2

# Why does a ball go far when I kick it hard?

*An object's motion can be changed by using force. Pushing and pulling are types of forces.*

Students learn that a force can be strong or weak. One way to measure force is to measure how fast an object moves and how far it travels. The distance something moves and the amount of time it takes to move that distance tells us the speed of the traveling object. Students will not learn how to calculate speed, but they will learn how to compare two traveling objects and determine which is moving at a faster speed.

## Day One

**Vocabulary:** *distance*

Distribute page 165 and read the introduction aloud. Guide students through the first activity. For the second activity, read the first question aloud. Then read the answer choices aloud and have students circle the correct answer. Repeat for the next two questions.

## Day Two

Distribute page 166 and read the introduction aloud. Guide students through the first two activities by helping them understand how to count the squares and where to draw the ball. Then help them see the relationship between a big force and a small force, and have them complete activity 3.

## Day Three

**Vocabulary:** *speed*

Distribute page 167 and read the introduction aloud. Have students complete the first activity independently and name the pictures they circled. For the second activity, help students read the graph and understand that more shaded bars means that the object shown has more speed. Read each question aloud and have students write their answers.

## Day Four

Distribute page 168 and read the introduction aloud. Invite students to mime different actions that demonstrate varying degrees of force. (e.g., kick, tap, pound, pat) Then guide students through the first activity by discussing each picture and then having them choose the correct answer. For the second activity, read each sentence aloud and have students write the missing word.

## Day Five

Tell students they will review everything they've learned about force and speed. Distribute page 169 and have students complete the activities. Then go over the answers together.

Name _____

Daily Science
Big Idea 6
WEEK 2

Day 1

*Weekly Question*

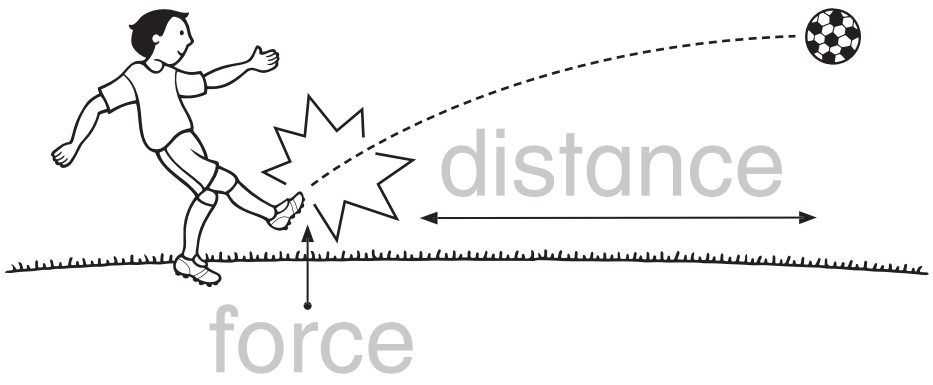
# Why does a ball go far when I kick it hard?

Force makes an object move. When an object moves, it goes a certain **distance.** Distance is how far an object moves.

**Vocabulary**

**distance**
*how far an object moves*

**1.** Look at the picture. Trace the words.




**2.** Look at the picture again. Read the questions. Circle the answers.

What force moved the ball?

the ground  the kick

What distance does the picture show?

how far the ball went  how far the boy ran

What did <u>not</u> move?

the ball  the ground

Name _____

Daily Science
Big Idea 6
WEEK 2

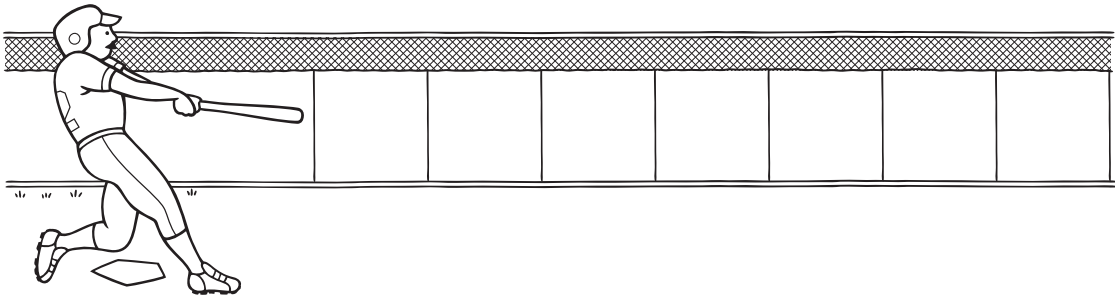
Day 2

*Weekly Question*

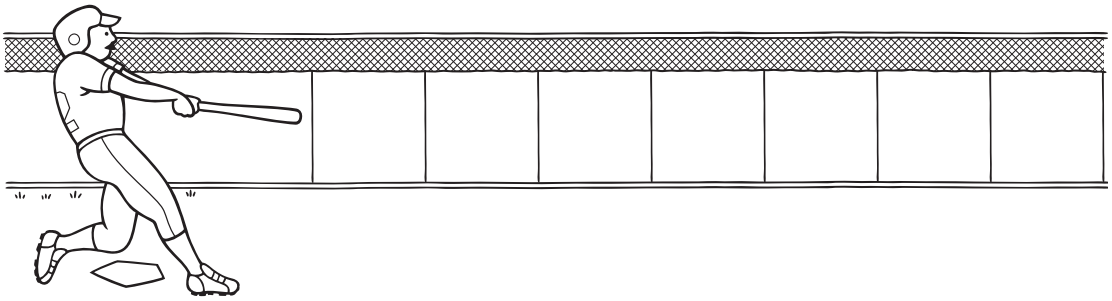
# Why does a ball go far when I kick it hard?

If you hit a ball with a lot of force, it will go far.
If you hit it with a little force, it will not go as far.

1. The player hits the ball with **a little force**. The ball goes 3 squares. Draw the ball where it lands.



2. The player hits the ball with **a lot of force**. The ball goes 6 squares. Draw the ball where it lands.



3. Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| A ball will move only if you hit it with a big force. | yes | no |
| A small force will make a ball go farther than a big force. | yes | no |

Name _____

Daily Science
Big Idea 6
WEEK 2

Day 3

*Weekly Question*

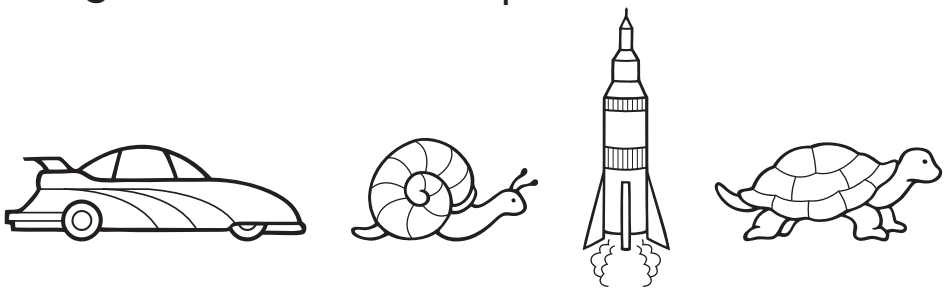
# Why does a ball go far when I kick it hard?

How fast or slow something moves is its **speed**.
An airplane has a lot of speed. It goes fast.
A snail doesn't have much speed. It goes slow.

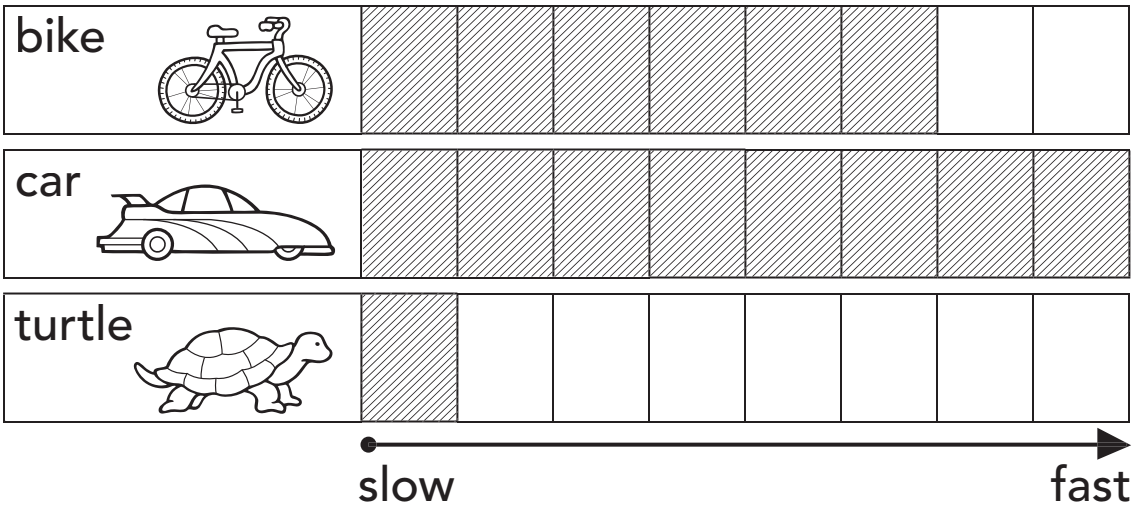
**Vocabulary**

**speed**
*how fast something moves*

**1.** Look at the pictures. Circle the pictures of things that have a lot of speed.



**2.** Look at the graph. Answer the questions.




Which one has the most speed? _____

Which one is slower than the bike? _____

Name _____

Daily Science
Big Idea 6
WEEK 2

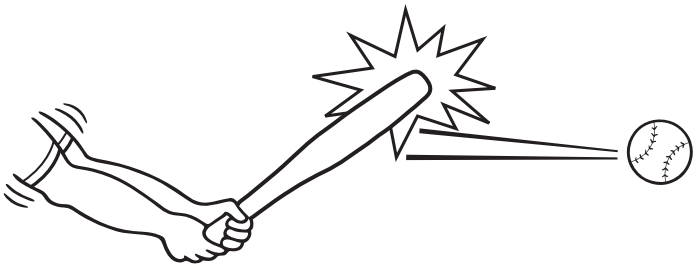
Day 4

*Weekly Question*

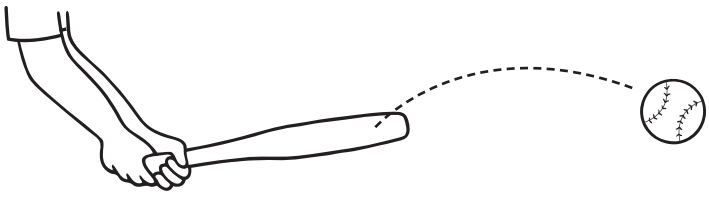
# Why does a ball go far when I kick it hard?

A **kick** is a big force. It will make a ball go far. It will make a ball go fast. A **tap** is a little force. It will not make a ball go as far or as fast.

**1.** Look at the pictures. Predict what will happen. Put an **X** next to the correct answer.



☐ the ball goes far ☐ the ball goes a short distance



☐ the ball goes far ☐ the ball goes a short distance

**2.** Complete the sentences. Write **kick** or **tap**.

I _____ the ball hard to make it go far.

I _____ the ball to move it a little bit.

Name _____

Daily Science

Big Idea 6

WEEK 2

Day 5

*Weekly Question*

# Why does a ball go far when I kick it hard?

**1.** Read each question. Circle the correct answer.

What tells you how fast or slow something is?

speed force distance

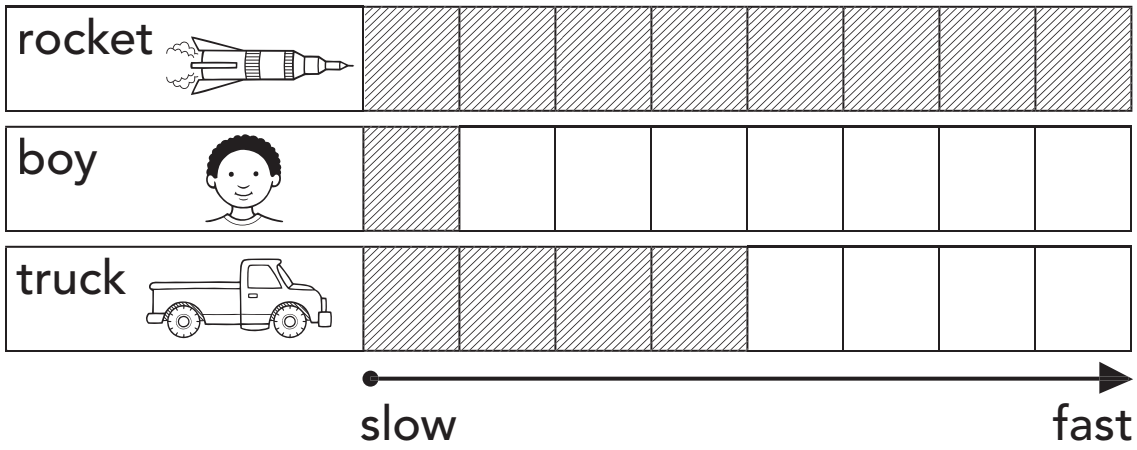
What tells you how far something goes?

speed force distance

What do you use when you kick a ball?

speed force distance

**2.** Look at the graph. Answer the questions.




Which thing has the most speed? _____

Which thing has the least speed? _____


# Week 3

# Why do cars have steering wheels?

*An object's motion can be changed by using force. Pushing and pulling are types of forces.*

When an object such as a car moves, it is following a path. Students will learn that without a steering wheel, there would be no way to change that path. A steering wheel applies force to turn the wheels, changing a car's path. This is similar to using force to turn the handlebars on a bike, which moves the front wheel and changes the bike's path. As a result, cars and bikes can move straight, around a curve, or even in a circle.

## Day One

**Vocabulary:** *backward, forward*

**Materials:** toy car

Distribute page 171 and read the introduction aloud. Quickly review the concepts of pushing and pulling, if necessary. Then say: **When we push or pull a toy car, we change where the car is. We can use words to describe that change. For example, we can push it *forward* and *backward*.** Demonstrate with the car as you say each word. Then guide students through the activities.

## Day Two

**Vocabulary:** *path*

Distribute page 172 and read the introduction aloud. Brainstorm with students examples of paths. (roads, sidewalks, train tracks, and so on) Direct students' attention to the paths in activity 1 and read their labels aloud. Then have students complete the activity. For the second activity, read the first sentence aloud and model drawing a line to the correct word. Then have students complete the activity.

## Day Three

**Vocabulary:** *force*

**Materials:** ball (optional)

Distribute page 173 and read the introduction aloud. You may want to roll or hit a ball to demonstrate the concept of using force to change an object's path. Then have students complete the first activity independently. For the second activity, read the riddle aloud and have students write their answer.

## Day Four

Distribute page 174 and read the introduction aloud. Say: **A steering wheel lets us use force to change a car's path. Without it, we couldn't turn the car.** Then distribute crayons and guide students through the activity, providing assistance as needed.

## Day Five

Tell students they will review everything they've learned about moving objects and their paths. Distribute page 175 and have students complete the activities. Go over the answers together.

Name _____

Daily Science

Big Idea 6

WEEK 3

Day 1

*Weekly Question*

# Why do cars have steering wheels?

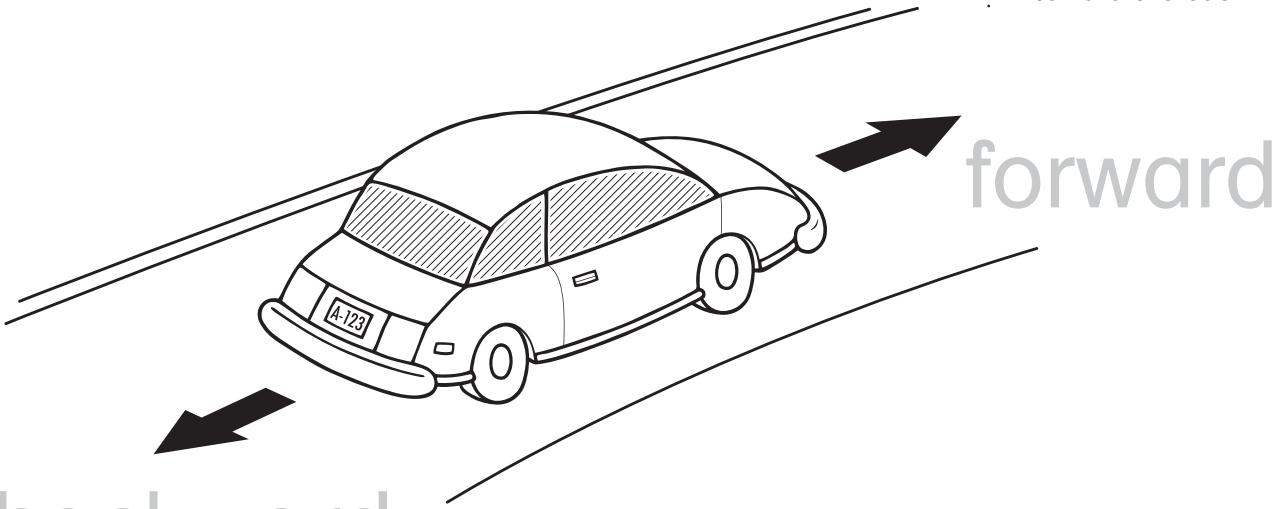
When you push or pull something, it moves. That changes where the thing is. You can push or pull something **forward**. You can push or pull something **backward**.

**Vocabulary**

**forward**
*toward the front*

**backward**
*toward the back*

**1.** Look at the picture of the car. Trace the words that tell how the car changes where it is.




**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| When you pull something, it moves. | yes | no |
| Force always moves something forward. | yes | no |
| You can push something backward. | yes | no |

Name _____

Daily Science
Big Idea 6
WEEK 3

Day 2

*Weekly Question*

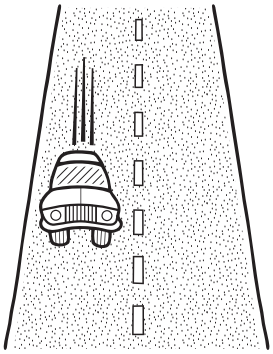
# Why do cars have steering wheels?

A **path** shows where something is going. Some paths are straight. Some paths are curved. Some go in a circle.

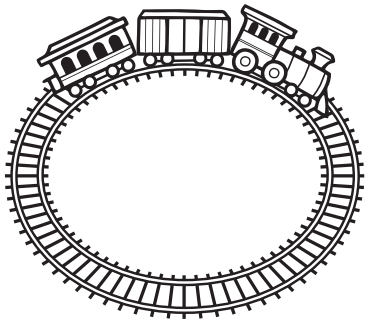
**Vocabulary**

**path**
*the distance and direction an object travels*

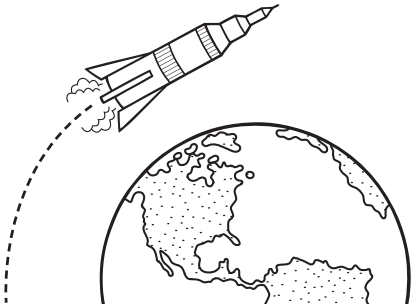
**1.** Look at the pictures. Draw a line to show the path of each object.



straight



circle



curved

**2.** Look at the pictures again. Draw a line to the word that completes each sentence.

| | | |
|---|---|---|
| The train tracks make a _____. | • | • straight |
| The rocket's path is _____. | • | • circle |
| The car is going _____. | • | • curved |

Name _____

Daily Science
Big Idea 6
WEEK 3

Day 3

*Weekly Question*

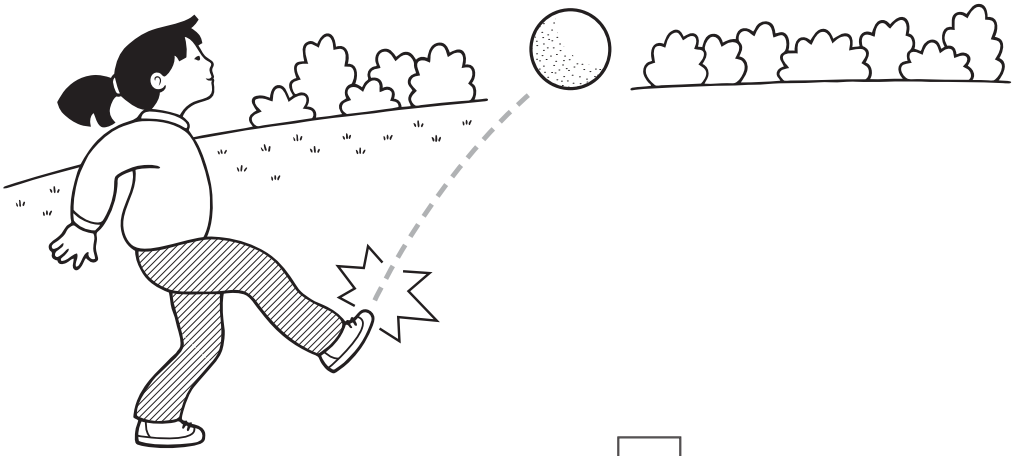
# Why do cars have steering wheels?

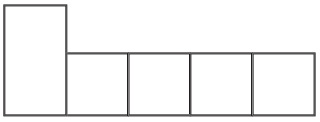
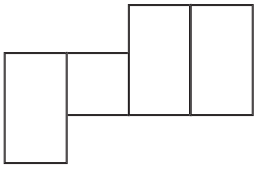
You can change the path of an object with **force**. Hitting a ball with a bat changes the ball's path. The bat pushes the ball. The ball moves away from the bat.

**Vocabulary**

**force**
*something that makes an object move*

**1.** Look at the picture. Trace the path of the ball. Complete the sentences.



The girl kicks the ball. The  of the kick changes the  of the ball.

**2.** Read the riddle. Write the answer.

You use me to change an object's path.

I am a kick, a throw, or a hit.

What am I? _____

Name _____

Daily Science
Big Idea 6
WEEK 3

Day 4

*Weekly Question*

# Why do cars have steering wheels?

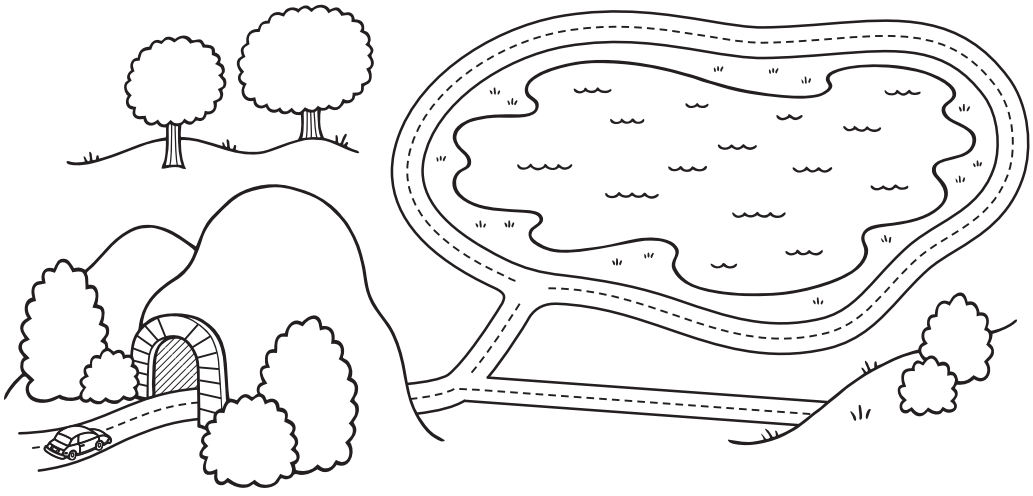
A steering wheel changes the path of a car. When you turn the steering wheel, you use force. The steering wheel sends that force to the car's wheels. The wheels move. The car's path changes!

**Look at the picture. Help the car get to the lake. Circle the words to complete the directions. Then color the picture.**

1. To go into the tunnel, _____ the wheel.
   turn / don't turn

2. To get to the lake, _____ the wheel.
   turn / don't turn

3. To go around the lake, _____ the wheel.
   turn / don't turn



Name _____

Daily Science
Big Idea 6
WEEK 3

Day 5

*Weekly Question*

# Why do cars have steering wheels?

**1.** Complete each sentence. Circle the correct word.

All things _____ in a path.

move stop circle

A path can be changed by _____.

curve force talking

Straight, curved, and in a circle are kinds of _____.

paths wheels forces

**2.** Draw each kind of path.

| | | |
|---|---|---|
| straight | circle | curved |


# Week 4

# Why do things fall down when you drop them?

*An object's motion can be changed by using force. Pushing and pulling are types of forces.*

Students learn that gravity is a force that pulls on everything. In fact, gravity exerts the same force on every object equally and constantly, no matter its size or how much mass it has. Gravity also pulls in a straight line to the ground. We can use force to keep an object from falling or to change the path of a falling object, but without something to hold it up, every object on Earth will fall to the ground.

## Day One

**Vocabulary:** *gravity*

**Materials:** a ball

Hold up the ball and ask: **What will happen if I let the ball go?** (It will fall.) Distribute page 177 and read the introduction aloud. Say: **Gravity is everywhere, and it is always pulling on us.** Have students complete the first activity. For activity 2, read the words in the box aloud. Then read the beginning of each line and have students say the missing word with you. Then have them write the word.

## Day Two

**Materials:** an eraser and a small book

Distribute page 178 and read the introduction aloud. Demonstrate gravity by dropping the eraser and the book at the same time. Say: **Gravity pulls on everything the same**. Read the instructions for activity 1 and have students complete it independently. For the second activity, read each sentence aloud and have students circle their answers.

## Day Three

Distribute page 179 and read the introduction aloud. Demonstrate by lifting an object from your desk and saying: **When I lift this, I'm using force to keep this from falling to the ground.** Guide students through the first activity. For the first picture, ask: **What is keeping the ball from falling?** (the woman) **Circle her.** Then distribute crayons and have students complete the second activity. You may want to help students brainstorm objects the clown might be holding up, such as plates, blocks, and so on.

## Day Four

Distribute page 180 and read the introduction aloud. Say: **Gravity is always pulling on us, but some things can change our path so we don't fall straight down.** Ask a volunteer to describe what happens when he or she slides down a slide. Say: **The slide changes the direction you fall. You don't fall straight down.** Distribute crayons and have students complete the activities independently. Then go over the answers together.

## Day Five

Tell students they are going to review everything they've learned about gravity. Have them complete page 181. Go over the answers together.

Name _____

Daily Science

Big Idea 6

WEEK 4

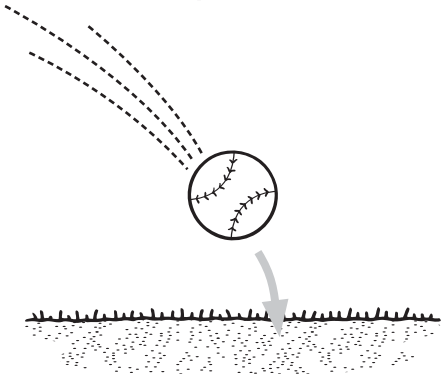
Day 1

*Weekly Question*

# Why do things fall down when you drop them?

When you throw a ball into the air, it will always come down. This is because a force pulls the ball to the ground. That force is called **gravity**.

**1.** Look at the picture. Write the word **gravity**.



**2.** Complete the poem. Use the words in the box.

| fall | force | down | ball |
|---|---|---|---|

Gravity is a _____.

So if you drop a _____,

Gravity pulls it _____.

Gravity makes it _____.

**Vocabulary**

**gravity**
*a force that pulls things to the ground*

Name _____

Daily Science
Big Idea 6
WEEK 4

Day 2

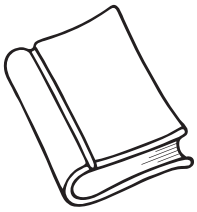
*Weekly Question*

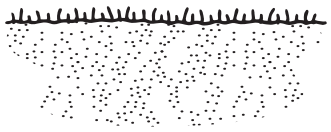
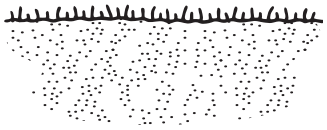
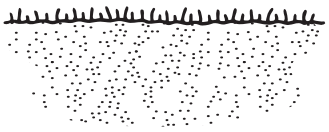
# Why do things fall down when you drop them?

Gravity pulls things down in a straight line. It pulls on all things the same way. They fall at the same speed. They land at the same time.

**1.** Draw an arrow to show which way each thing falls.





**2.** Read each sentence. Circle **yes** or **no**.

| | | |
|---|---|---|
| Gravity pulls things up. | yes | no |
| A book and a ball fall at the same speed. | yes | no |
| A book and a ball land at different times. | yes | no |
| You use gravity to throw a ball. | yes | no |

Name _____

Daily Science
Big Idea 6
WEEK 4

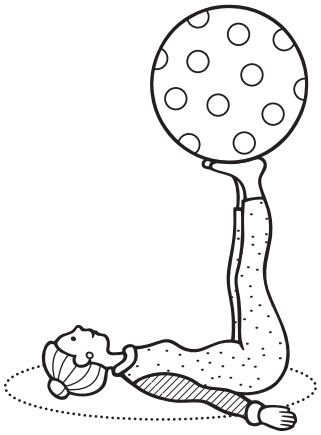
Day 3

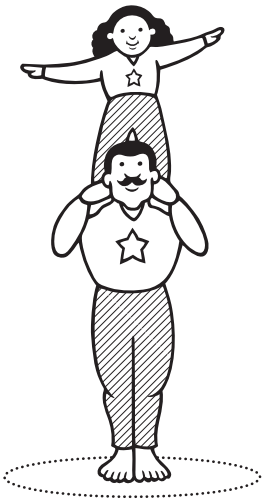
*Weekly Question*

# Why do things fall down when you drop them?

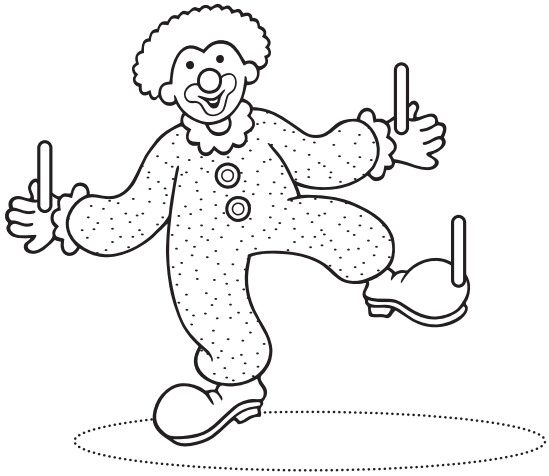
You can use force to keep things from falling. When you lift a cup to drink, you pull the cup to you. Your force keeps the cup up.

1. Look at the pictures. What is holding each thing or person up? Circle it.





2. Look at the picture. Draw some things for the clown to hold up.



Name _____

Daily Science
Big Idea 6
WEEK 4

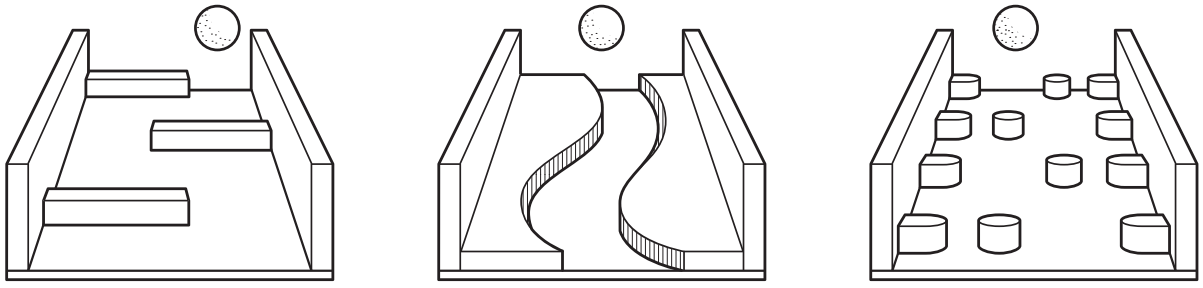
Day 4

*Weekly Question*

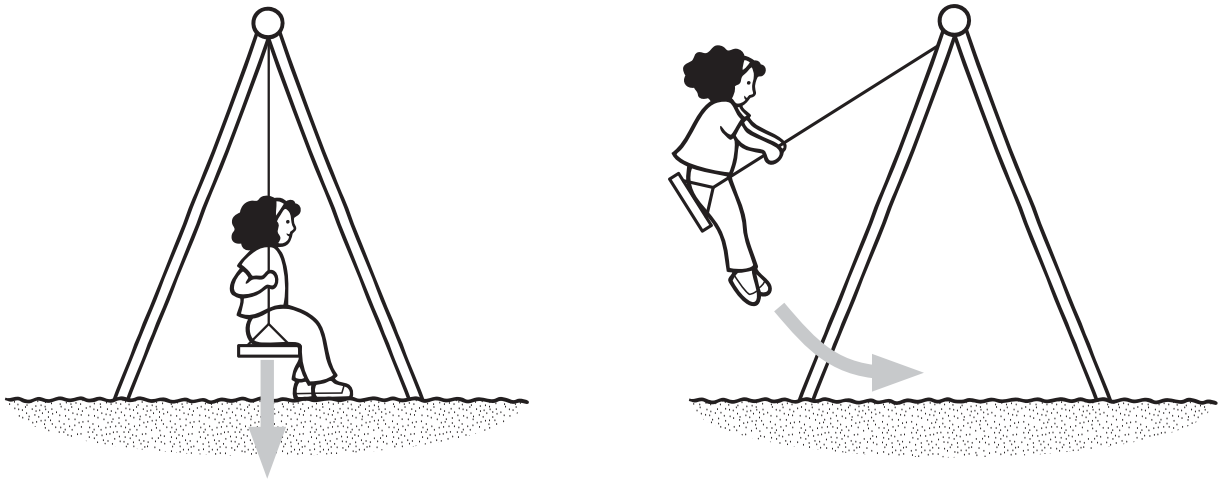
# Why do things fall down when you drop them?

When you get on a slide, you do not fall straight down. You travel the path of the slide. When you push yourself on a swing, you do not fall down. You go back and forth. The slide and the swing change your path. But gravity is still pulling on you.

**1.** Look at the pictures. Draw the path that each ball will follow as it falls.



**2.** Trace the arrows to show how gravity pulls on the swing. Then color the pictures.



Name _____

Daily Science
Big Idea 6
WEEK 4

Day 5

*Weekly Question*

# Why do things fall down when you drop them?

**1.** Complete the sentences. Circle the correct words.

The force that pulls everything down is _____.

gravity  a path  the ground

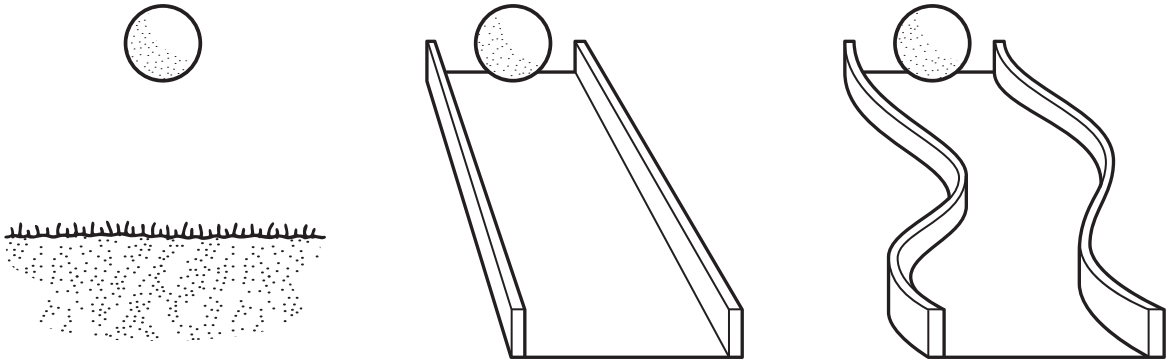
A slide will change the _____ that you follow to the ground.

force  path  gravity

You can use _____ to keep a ball from falling.

gravity  a slide  force

**2.** Look at the pictures. Draw the path that each ball will follow to the ground.



Name _____


Unit Review

*Comprehension*

# Force and Motion

Read each question. Fill in the bubble next to the correct answer.

**1.** What force makes things fall when you drop them?
- Ⓐ air
- Ⓑ gravity
- Ⓒ speed
- Ⓓ distance

**2.** What word describes how far something moves?
- Ⓐ distance
- Ⓑ speed
- Ⓒ pull
- Ⓓ push

**3.** What word describes how fast something moves?
- Ⓐ force
- Ⓑ distance
- Ⓒ gravity
- Ⓓ speed

**4.** What are pushes and pulls?
- Ⓐ forces
- Ⓑ balls
- Ⓒ air
- Ⓓ wagons

Name _____

Unit Review

*Vocabulary*

# Match the Words


Draw lines to match the words to their meanings.

| | |
|---|---|
| backward | • a round object that turns |
| distance | • moving from one place to another |
| force | • toward the back |
| forward | • to bring an object closer |
| gravity | • something that makes an object move |
| motion | • to move an object farther away |
| path | • how far an object moves |
| wheel | • how fast something moves |
| pull | • the force that pulls everything down |
| push | • toward the front |
| speed | • the distance and direction that something travels |

Name _____

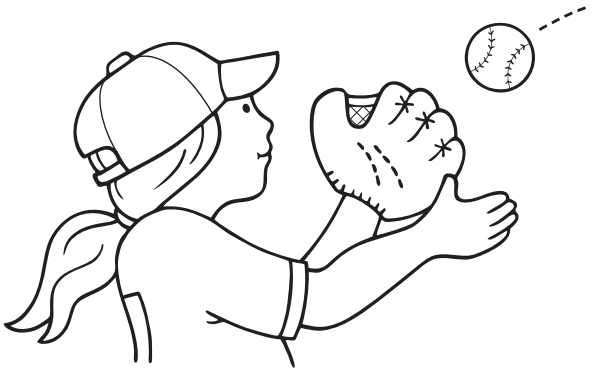
Daily Science
Big Idea 6
WEEK 5

Unit Review

*Visual Literacy*

# What Is Happening?

Look at each picture. Read each sentence.
Circle the sentence that matches the picture.



**1.** Gravity makes the ball come down.

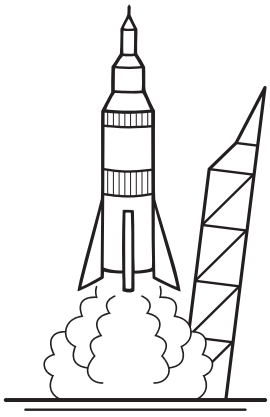
Gravity makes the ball go up.

Gravity makes the ball go fast.

**2.** The car is pulling the boy.

Gravity is pushing the car.

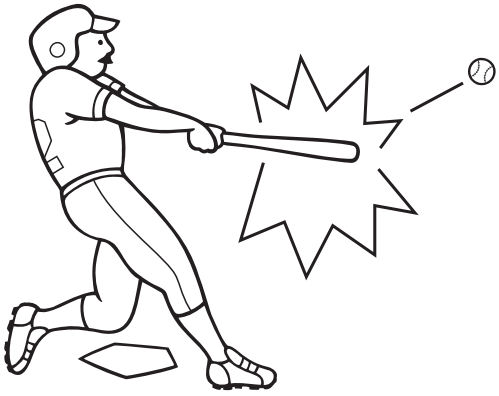
The boy is pushing the car.



**3.** The rocket will go slow.

The rocket will go fast.

The rocket will not go.



**4.** The ball will go far.

The ball will go in a circle.

The ball will not go anywhere.

Name _____

Unit Review

*Hands-on Activity*

# Forces on the Playground


Think about how you play on a playground. How do you use pushes and pulls?

**What You Need**

- a pencil or crayons

1. Go outside and play on a playground.
2. Write or draw three things you did on the playground. Then write whether each thing was a push or a pull.

| What I did | Was it a **push** or a **pull**? |
|---|---|
| | |

# Answer Key

***Page 9***

1. (circle frog and tree)
2. grow
3. Drawings will vary—e.g., plant, pet, baby

***Page 10***

1. (draw lines to match: puppy/dog, seed/flower, tadpole/frog)
2. living

***Page 11***

1. survive
2. yes
   yes
   no
3. (color food can and water dish)

***Page 12***

1. (draw an X on spoon and box)
2. A
3. Answers will vary—e.g., chair, book, pencil, desk
4. nonliving

***Page 13***

1. (color Big Bear)
2. no
   yes
   yes
3. nonliving, living, survive

***Page 15***

1. (draw lines to match: cat/fish, monkey/bananas, bird/worms, cow/grass)
2. energy, energy

***Page 16***

1. (circle apple, banana, bread)
2. Drawings will vary—e.g., pizza, grapes, carrots

***Page 17***

1. (draw lines to match: monkey/jungle, cow/field, penguin/South Pole)
2. no
   no
   yes

***Page 18***

(circle the food to match: giraffe/leaves, fish/bug, monkey/bananas)

***Page 19***

1. yes
   yes
   no
   yes
2. Drawings will vary—e.g., pizza and bananas
3. yes

***Page 21***

1. (draw lines to sun, water, air)
2. food

***Page 22***

1. leaf, stem, roots
2. (color leaves and stem green; roots brown)

***Page 23***

1. sun, air, water
2. no
   yes
   yes

***Page 24***

1. (color blocks green and drops blue); food, water
2. stem, stem

***Page 25***

1. sun
2. leaves
3. roots
4. stem
5. no

***Page 27***

1. (circle dog, fish, plant; color picture)
2. water, water, water

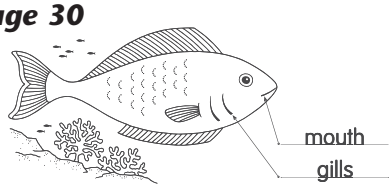
***Page 28***

(draw a fish in lake and ocean); fresh, salt

***Page 29***

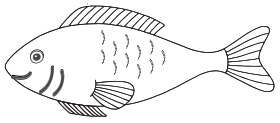
1. gills; (color the fish)
2. gills, water

***Page 30***

1. 

2. mouth, gills

***Page 31***

1. water
2. yes
   no
   no
   yes
3. 
4. no
   yes

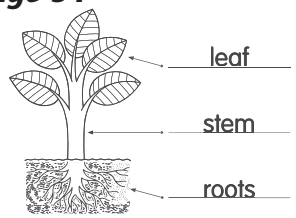
### *Page 32*

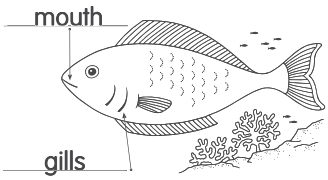
1. whale
2. banana
3. leaf
4. puppy

### *Page 33*

1. ocean
2. leaves
3. gills
4. energy
5. nonliving
6. grow

### *Page 34*

1. 


2. 


### *Page 35*

(color celery stalk red)

### *Page 39*

1. (draw lines to match: owl/forest, fish/ocean, camel/desert)
2. habitat

### *Page 40*

1. (circle bird, fox, rabbit)
2. forest
   den
   hole
   nest

### *Page 41*

1. (circle owl, snake, coyote)
2. desert
   hole
   den

### *Page 42*

1. (circle fish, whale, octopus, corals)
2. yes
   no
   yes

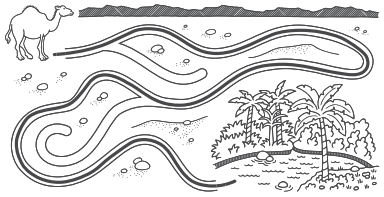
### *Page 43*

1. A
   B
2. desert, ocean, forest

### *Page 45*

1. (circle camel)
2. camels, camels
3. 1, 2

### *Page 46*

1. 

2. food, water

### *Page 47*

1. stores
2. hump, desert, stores

### *Page 48*

1. (trace *hump, long eyelashes, big feet*)
2. no
   yes
   yes

### *Page 49*

1. no
   yes
   yes
2. water, camel, fat, feet

### *Page 51*

1. (trace *ocean*, *whale*; color picture)
2. ocean, whale

### *Page 52*

1. krill
2. no
   yes
   yes
   no

### *Page 53*

1. (circle frog, fish, turtle; write *lake;* color picture)
2. no
   yes
   no

### *Page 54*

lake, ocean; (draw a whale in bottom picture)

### *Page 55*

1. ocean
   salt water
   whale
2. whale, krill, lake

### *Page 57*

1. (trace leaves)
2. leaves

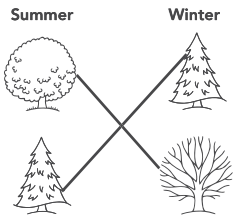
### *Page 58*

1. (color leaves on the left green; on the right red, yellow, or orange)
2. green, red

### *Page 59*

1. (color picture, using green for trees)
2. trees, leaves, cold

### Page 60

1. 

(color trees)
2. yes
no

### Page 61

1. (circle maple, willow, oak; box pine)
2. leaves, winter, evergreen
3. yes

### Page 62

1. C
2. A
3. B
4. C

### Page 63

1. Habitats: forest, desert, lake, ocean
Animals: camel, krill, whale
Animal homes: den, nest
2. habitat
stores
evergreen
leaves

### Page 64

1. forest
2. (circle and color deer, fox, chipmunk, skunk, rabbit, two birds, squirrel)

### Page 65

Answers will vary.

### Page 69

1. Earth
2. rotates, rotates

### Page 70

1. day
2. (color the suns)
3. noon

### Page 71

1. night
2. yes
no
no

### Page 72

night, day

### Page 73

1. rotates, day, night
2. rotates, day, night

### Page 75

1. stars, stars, stars, sun
2. far

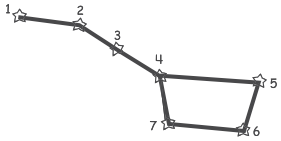
### Page 76

1. moon
2. rock
the sun

### Page 77

1. planet, planet, planet
2. (color Venus brown; Earth blue and green; Mars red)

### Page 78

1. (circle stars; circle sun)
2. 


### Page 79

1. yes
no
yes
2. stars, moon, planet

### Page 81

1. energy, light, heat
2. sun

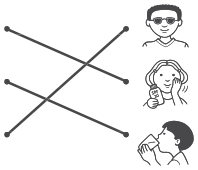
### Page 82

1. (circle candle, sun, oven, light bulb, campfire)
2. light, heat, light and heat

### Page 83

1. (circle boy, flower, cow, corn)
2. plants, food, live

### Page 84

1. Do this so the sun doesn't burn your skin.
Do this so you don't get thirsty in the sun.
Do this so the sun doesn't hurt your eyes.

2. no
no
yes

### Page 85

1. B
A
A
2. heat
sun
Earth

### Page 87

1. (color picture; circle sun; box moon)
2. closer to
bigger
the moon

### Page 88

1. mountain, crater
2. rock
crater

### Page 89

1. (color yellow for lit-up areas, black for dark areas)
2. yes
   no
   yes

### Page 90

1. moon, air, water
2. (color picture)

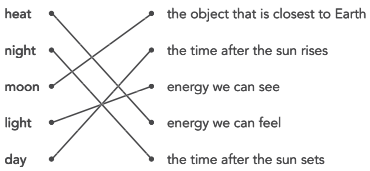
### Page 91

1. yes
   no
   yes
   no
2. crescent, new, full
3. no

### Page 92

1. B
2. C
3. A
4. B

### Page 93

1. planets
   craters
   rotates
2. 


### Page 94

1. A
2. B
3. B
4. A

### Page 95

Answers will vary.

### Page 99

1. seasons
   summer
   summer
2. (circle first and third pictures)

### Page 100

1. axis; (color picture)
2. no
   no
   yes

### Page 101

1. (trace orbit and circle house on right)
2. orbits
   axis

### Page 102

1. (circle effects: a lot of, hot, long)
2. summer, sun

### Page 103

1. B
   C
   B
   A
2. axis, Earth, sun

### Page 105

1. winter
   winter
2. no
   yes
   yes
   no

### Page 106

1. (draw an X in top box); temperature
2. cold, warm, cold

### Page 107

1. thermometer
2. 32; (color thermometer to 32°F)
3. 30, 50, 40

### Page 108

1. 

2. snow
3. no
   yes
   yes

### Page 109

1. winter
   temperature
   thermometer
   away from
2. above, below

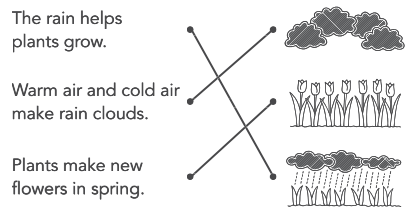
### Page 111

1. (trace orbit and circle house on bottom)
2. spring
3. summer
   spring

### Page 112

(color picture); flowers, bloom

### Page 113

1. 

2. rain; (draw picture)

### Page 114

1. (color pictures)
2. yes
   no
   yes

### Page 115

1. yes
   no
   yes
2. spring
3. 3, 1, 2

### Page 117

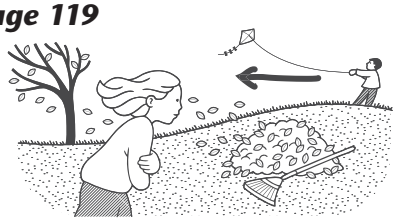
1. (color leaves); fall
2. (circle third picture)

### Page 118

1. (circle top house)
2.

| Cause | Effect |
|---|---|
| Earth gets less sunlight in the fall. | We have four seasons. |
| Earth orbits the sun. | Days are cooler and shorter. |

### Page 119

1. 
2. breeze, gust

### Page 120

1. less
   cold and dry
2. (draw and color a tree with fall-colored leaves)

### Page 121

1. C
   B
   C
2. (check mark by first, third, and last sentence)

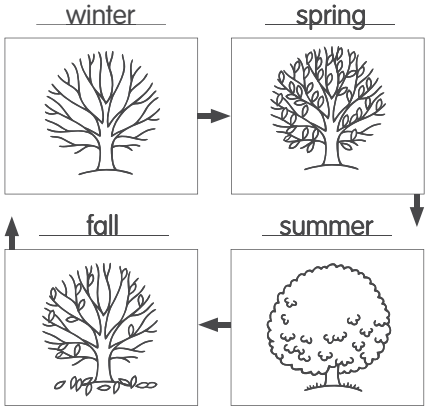
### Page 122

1. C
2. A
3. D
4. B

### Page 123

1. spring
2. thermometer
3. winter
4. axis
5. summer

### Page 124




### Page 125

wind, there is no wind, it is very windy

### Page 129

1. matter
   solid
2. ball, block, pen

### Page 130

1. mass
   mass
2. (trace shapes and draw lines to match)
3. shape

### Page 131

1. mixture
2. (circle the doll, ball, teddy bear, car, block)

### Page 132

1. wall, nose
2. yes
   no

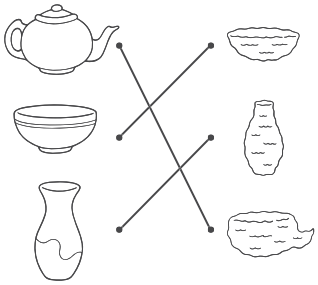
### Page 133

1. B
   C
   A
   B
2. Answers will vary—e.g., book, chair, table

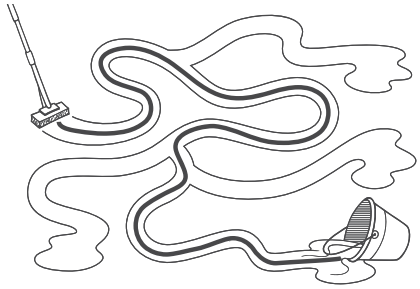
### Page 135

1. liquid
   liquid
   liquid
2. (circle cup, hose)

### Page 136



### Page 137

1. 
2. yes
   no
   yes

### Page 138

1. (cross out ball and shoe; circle rain)
2. drip
   spray
   splash

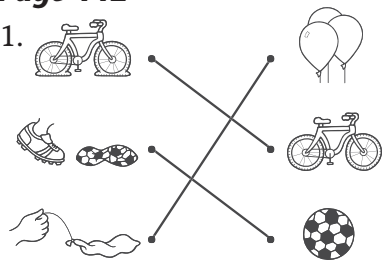
### Page 139

1. liquid
   shape
   matter
   cup
2. liquid, shape, flow

### Page 141

1. (trace *solid*, *liquid*, *gas*)
2. gas
   air
   mass

### Page 142

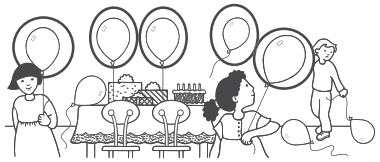
1. 

2. air, fills

### Page 143

1. mass
   mass
2. (circle air-filled balloon, air-filled bottle, air-filled jar )

### Page 144

1. 

   (color picture)
2. gas, gas, mass, mass

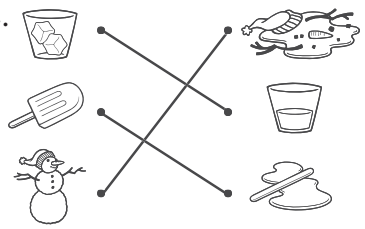
### Page 145

1. yes
   no
   no
2. gas, mass, float
3. Drawings will vary—should include balloons.

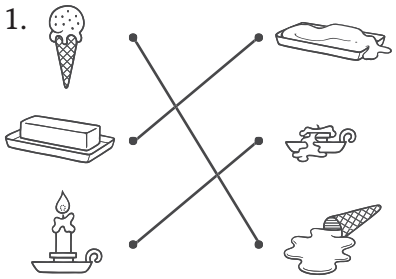
### Page 147

1. (trace *cold*, *clear*, *hard*, *slippery*)
2. solid
3. (circle icicles, snowman)

### Page 148

1. melts, liquid
2. 

### Page 149

1. 

2. heat

### Page 150

1. (color the fire red, draw steam, and write *steam*)
2. no
   yes
   yes

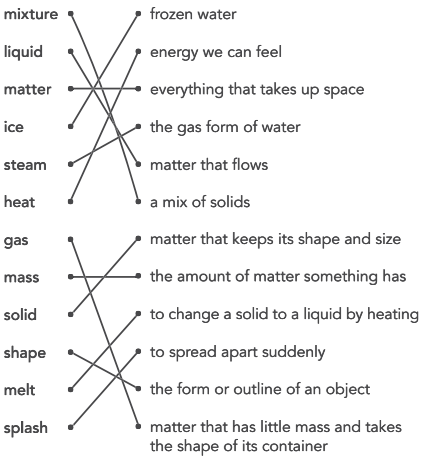
### Page 151

1. (draw lines to match: water/liquid, steam/gas, ice/solid)
2. heat, heat, gas
3. (draw melted cone and water in glass)

### Page 152

1. A
2. C
3. D
4. B

### Page 153




### Page 154

(circle liquid, solid, gas,
gas, solid, gas,
solid, liquid, gas)

### Page 155

Answers will vary.

### Page 159

1. (circle people, bus, birds, dog)
2. motion
   motion

### Page 160

1. push
   pull
2. pull, pull, push

### Page 161

1. wheel
2. Answers will vary—e.g., bike, car, skateboard, etc.

### Page 162

1. (circle boy in wagon and full cart)
2. yes
   no
   yes
   no

### Page 163

1. force
   motion
   wheel
2. wheel, push, pull

### Page 165

1. (trace *force*, *distance*)
2. the kick
   how far the ball went
   the ground

### Page 166

1. (draw ball in third square)
2. (draw ball in sixth square)
3. no
   no

### Page 167

1. (circle car, rocket)
2. car
   turtle

### Page 168

1. (draw an X: the ball goes far, the ball goes a short distance)
2. kick
   tap

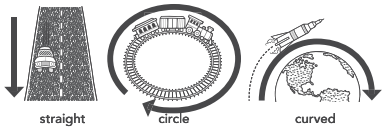
### Page 169

1. speed
   distance
   force
2. rocket
   boy

### Page 171

1. (trace *backward*, *forward*)
2. yes
   no
   yes

### Page 172

1. 

2. circle
   curved
   straight

### Page 173

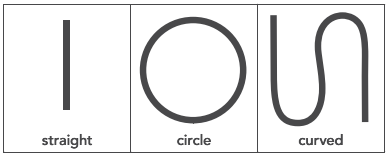
1. (trace the path); force, path
2. force

### Page 174

1. don't turn
2. turn
3. turn

(color picture)

### Page 175

1. move
   force
   paths
2. 


### Page 177

1. gravity
2. force, ball, down, fall

### Page 178

1. (draw three arrows straight down)
2. no
   yes
   no
   no

### Page 179

1. (circle the woman, man, bike)
2. Drawings will vary—e.g., plates, balls, books, hats

### Page 180

1. (draw each path)
2. (trace the path and color pictures)

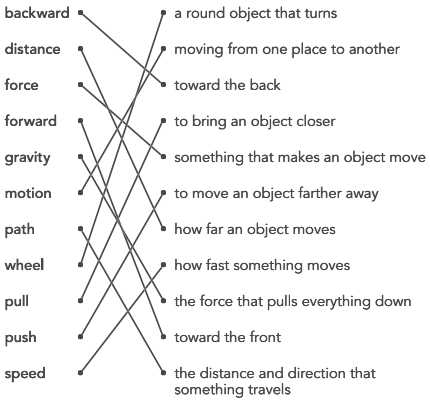
### Page 181

1. gravity
   path
   force
2. (draw each path)

### Page 182

1. B
2. A
3. D
4. A

### Page 183




### Page 184

1. Gravity makes the ball come down.
2. The boy is pushing the car.
3. The rocket will go fast.
4. The ball will go far.

### Page 185

Answers will vary—e.g., swing on the swing/push and pull; throw ball/push

## Read and Understand Science

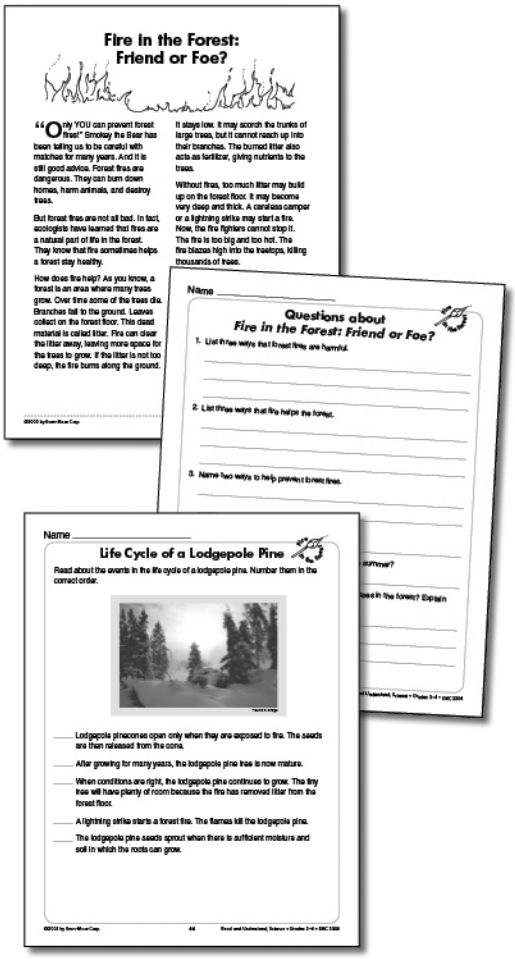
The 27 stories in each book address objectives drawn from National Science Education Standards. There are stories in the areas of life science, physical science, earth & space science, and science & technology. 144 reproducible pages. ***Correlated to state and Common Core State Standards.***

**Grades 1–2**
Topics include leaves, water, sun, and measuring temperature.
EMC 3302

**Grades 2–3**
Topics include plant life cycle, magnets, fossils, and telescopes.
EMC 3303

**Grades 3–4**
Topics include five senses, sound, solar system, and recycling.
EMC 3304

**Grades 4–6**
Topics include animals, states of matter, mountains, and CT scans.
EMC 3305





*"Read and Understand Science* is a practical tool for introducing and explaining scientific vocabulary through developmentally appropriate nonfiction stories. It effectively integrates science with language arts and aligns with the standards."

Jennifer M.,
K-3 Science Teacher

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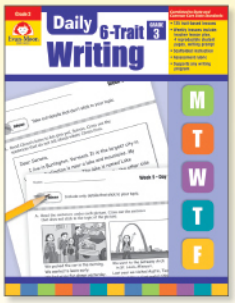


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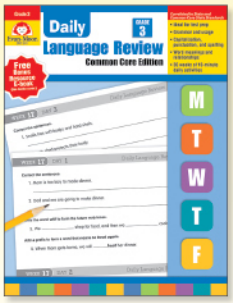


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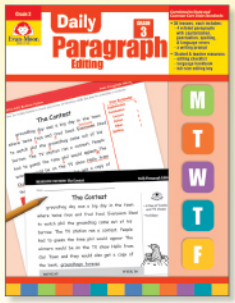


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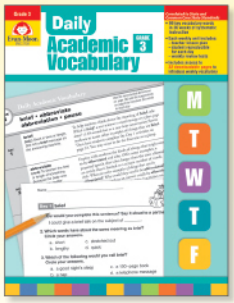


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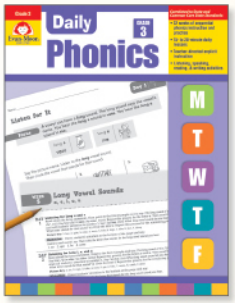


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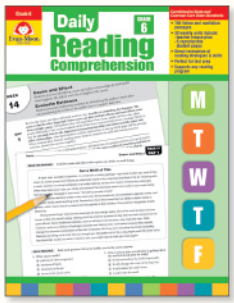


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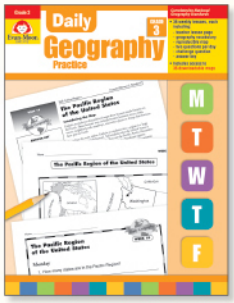


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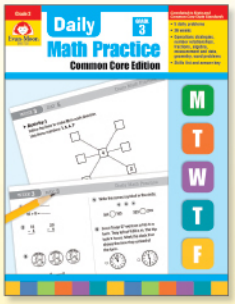


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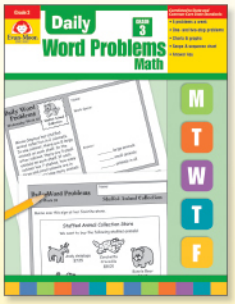


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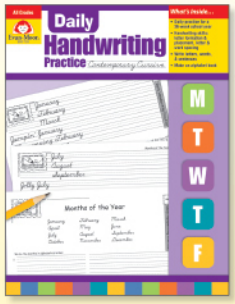


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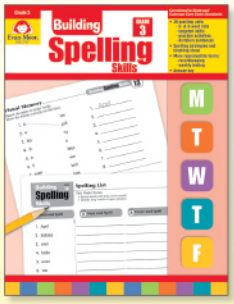


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