# LIFE SCIENCE

## CHAPTER 1

### Plant Life Cycles

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Concept Map</td>
<td>1</td>
</tr>
<tr>
<td>Chapter Literature: Poem—The Seed</td>
<td>2</td>
</tr>
<tr>
<td><strong>Lesson 1</strong></td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>3</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>5</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>6</td>
</tr>
<tr>
<td><strong>Lesson 2</strong></td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>7</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>9</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>10</td>
</tr>
<tr>
<td>Writing in Science</td>
<td>11</td>
</tr>
<tr>
<td><strong>Lesson 3</strong></td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>13</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>15</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>16</td>
</tr>
<tr>
<td><strong>Lesson 4</strong></td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>17</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>19</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>20</td>
</tr>
<tr>
<td>Reading in Science</td>
<td>21</td>
</tr>
<tr>
<td><strong>Chapter 1 Vocabulary</strong></td>
<td>23</td>
</tr>
</tbody>
</table>
CHAPTER 2
Life Cycles of Animals

Chapter Concept Map ................................................................. 25
Chapter Literature: Poem—In Payment ...................................... 26

Lesson 1
Lesson Outline ................................................................. 27
Lesson Vocabulary ............................................................. 29
Cloze Test .......................................................... 30

Lesson 2
Lesson Outline ................................................................. 31
Lesson Vocabulary ............................................................. 33
Cloze Test .......................................................... 34
Reading in Science ......................................................... 35

Lesson 3
Lesson Outline ................................................................. 37
Lesson Vocabulary ............................................................. 39
Cloze Test .......................................................... 40

Lesson 4
Lesson Outline ................................................................. 41
Lesson Vocabulary ............................................................. 43
Cloze Test .......................................................... 44
Writing in Science ......................................................... 45

Chapter 2 Vocabulary ............................................................. 47
## Contents

### Lesson 2
- Lesson Outline .................................................. 77
- Lesson Vocabulary ............................................. 79
- Cloze Test ......................................................... 80

### Lesson 3
- Lesson Outline .................................................. 81
- Lesson Vocabulary ............................................. 83
- Cloze Test ......................................................... 84
- Reading in Science ............................................. 85

### Chapter 4 Vocabulary ............................................ 87

### CHAPTER 5

#### Earth’s Resources
- Chapter Concept Map ........................................... 89
- Chapter Literature: Poem—Sun .............................. 90

### Lesson 1
- Lesson Outline .................................................. 91
- Lesson Vocabulary ............................................. 93
- Cloze Test ......................................................... 94

### Lesson 2
- Lesson Outline .................................................. 95
- Lesson Vocabulary ............................................. 97
- Cloze Test ......................................................... 98
- Reading in Science ............................................. 99

### Lesson 3
- Lesson Outline .................................................. 101
- Lesson Vocabulary ............................................. 103
- Cloze Test ......................................................... 104
- Writing in Science ............................................. 105

### Chapter 5 Vocabulary ............................................ 107
PHYSICAL SCIENCE

CHAPTER 6
Objects in Motion

Chapter Concept Map .................................................. 109
Chapter Literature: Poem—If ................................. 110

Lesson 1
Lesson Outline ......................................................... 111
Lesson Vocabulary .............................................. 113
Cloze Test ................................................................. 114

Lesson 2
Lesson Outline ......................................................... 115
Lesson Vocabulary .............................................. 117
Cloze Test ................................................................. 118

Lesson 3
Lesson Outline ......................................................... 119
Lesson Vocabulary .............................................. 121
Cloze Test ................................................................. 122
Reading in Science ................................................. 123

Lesson 4
Lesson Outline ......................................................... 125
Lesson Vocabulary .............................................. 127
Cloze Test ................................................................. 128
Writing in Science .................................................... 129

Chapter 6 Vocabulary .................................................. 131
CHAPTER 7
Forces at Work

Chapter Concept Map .................................................. 133
Chapter Literature: Poem—Magnet. ............................. 134

Lesson 1  Lesson Outline ............................................. 135
Lesson Vocabulary ...................................................... 137
Cloze Test ................................................................. 138

Lesson 2  Lesson Outline ............................................. 139
Lesson Vocabulary ...................................................... 141
Cloze Test ................................................................. 142
Reading in Science ..................................................... 143

Lesson 3  Lesson Outline ............................................. 145
Lesson Vocabulary ...................................................... 147
Cloze Test ................................................................. 148

Lesson 4  Lesson Outline ............................................. 149
Lesson Vocabulary ...................................................... 151
Cloze Test ................................................................. 152
Writing in Science ..................................................... 153

Chapter 7 Vocabulary ................................................ 155
Plant Life Cycles

Fill in the important ideas as you read the chapter. Use the sentences in the box to put the life cycle in the right order.

The seedling grows bigger and grows cones.
A seed sprouts and becomes a seedling.
The cones fall to the ground.

Adult pine tree makes seeds inside cones.

Pine Tree Life Cycle
The Seed

Read the poem on page 22.

Write About It

Response to Literature

1. What do you know about seeds?

________________________________________________________________________

________________________________________________________________________

2. What do seeds do? Use the poem to tell how you know.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. What kinds of plants do you know grow from seeds?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

4. Where do you think seeds come from?

________________________________________________________________________
Plants and Their Parts

Use your book to help you fill in the blanks.

What do roots, stems, and leaves do?

1. Most plants have __________, stems, and leaves.

2. Plants use these parts to get __________ and water.

3. Plant parts look different in different __________.

4. Desert plants have few or no __________.

How can we describe roots?

5. Even though they look different, all roots help plants __________ in their environment.

6. Some plants that live in dry places have very __________ roots.

7. They grow __________ to find water deep underground.
8. Roots not only help plants, they also help
____________________.

9. We eat ________________ such as radishes, carrots, and beets.

**What do flowers, fruit, and seeds do?**

10. Many plants have _________________.

11. Even though they look different, all flowers make _________________.

12. Inside a flower, there is a powder called _________________.

13. Plants that have ________________ also make fruit.

**Summarize the Main Idea**

14. How do plant parts help plants live in their environments?

_________________________________________

_________________________________________

_________________________________________
Plants and Their Parts

Match each word with its meaning.

1. stem ______  A. can grow into new plants
2. roots ______  B. use light to make food
3. leaves ______  C. take in water and minerals
4. flower ______  D. holds up a plant
5. fruit ______  E. makes seeds
6. seeds ______  F. keeps seeds safe

Label the drawings below with one of these words.

Fruit  

Flower  

Seeds

© Macmillan/McGraw-Hill
Plants and Their Parts

Fill in the blanks. Use the words in the box.

ground roots leaves
flowers seeds
environments fruit

Plants live in many different ____________________________, but most plants have the same parts. The ____________________________ take in water and minerals for the plant. In a dry place, they grow deep in the ____________________________ to find water. The ____________________________ use light and air to make food for the plant.

Many plants have flowers. We eat the ____________________________ of a broccoli plant. Flowers make ____________________________ that grow into new plants. Usually, the seed grows inside a ____________________________, which keeps the seed safe while it grows.
Flowers and Fruits

Use your book to help you fill in the blanks.

How do flowers make seeds?

1. Flowers have special parts so they can make ________________ plants.

2. The stamen of the flower makes ________________, a sticky powder.

3. The ________________ takes in the pollen and makes seeds.

4. The seeds can grow into new ________________.

5. Animals such as birds and bees can move pollen from a ________________ to a pistil.

6. After pollen lands on a pistil, the flower starts to lose its ________________.

7. The flower begins to grow into a ________________ with seeds.
How do seeds look?

8. Seeds need light, water, and food to
   __________________________.

9. All seeds have seed ___________________________ that
   protect the seed.

10. Some seeds have hard __________________________.

How do seeds move?

11. Animals help move seeds to new
    __________________________.

12. Oceans and __________________________ can move
    seeds, too.

13. Some seeds are light enough for the
    __________________________ to carry them far away.

Summarize the Main Idea

14. How do flowers make seeds and fruits?
    __________________________________________
    __________________________
    __________________________
Flowers and Fruits

Write a word from the box to answer each riddle.

1. I am a sticky powder. Animals, insects, wind, and water help move me from one flower to another. What am I? ________________

2. I help protect the seed. I keep seeds from drying out. What am I? ________________

3. I am a special part of a flower. I make a sticky powder called pollen. What am I? ________________

4. I am a special part of a flower, too. I take in pollen and make seeds. What am I? ________________

Look at the picture. Then answer the question.

5. How do bees help flowers grow?

__________________________________

__________________________________

__________________________________

__________________________________

__________________________________
Inside a flower, the ________________ makes pollen. Insects and other animals help move pollen from the stamen to the ________________, another part inside the flower. Next, the flower begins to grow _________________. A fruit is a special container for _________________. Seeds grow inside fruit. They hold food inside to help them grow into new _________________. They have a ________________ that helps keep them safe and from drying out.
Find the Main Idea and Details

Write About It

Write a paragraph about a flower that you observed. Make sure you have a main idea and details.

Getting Ready

Choose a flower. Write its name in the center of the flower below. Write facts and details about the flower in the petals. Fill in as many petals as you can. You can add petals if you like.
Drafting
The main idea tells what a paragraph is about. Write a main idea about your flower.

Now write details about your flower. Details tell more about the main idea.

Revising and Proofreading
A complete sentence has a naming word and a telling word. It tells a complete idea.

- Did I write a main idea about my flower?
- Did I use details that support the main idea?
- Did I correct all spelling, punctuation, and capital letter mistakes?
Plants Grow and Change

Use your book to help you fill in the blanks.

How are plants like their parents?

1. Animals have babies that look and act like their ________________.

2. Plants work the ________________ way.

3. A sunflower makes seeds that grow into ________________.

4. Young plants will have many of the same ________________ as their parent plants.

5. They will have the same ________________ of flowers, petals, and leaves.
What is a life cycle?

6. A life cycle shows how a living thing changes, and makes new living things.

7. The plant life cycle begins with a .

8. It continues as plants make plants.

9. All plants follow the same life cycle as their plants.

10. Different plants have different cycles.

Summarize the Main Idea

II. How do plants grow and change?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Plants Grow and Change

Write the correct word for each meaning. Then find the word in the puzzle and circle it.

1. The ways plants look and act like their parent plant _____________________

2. Shows how a plant grows, changes, and makes new living things _____________________

3. A young plant _____________________

Circle the letter of the best answer.

4. What happens after a seed falls to the ground?

   a. It dies.
   
   b. It is an adult plant.
   
   c. It makes a new seed.
   
   d. It sprouts.
Plants Grow and Change

Fill in the blanks. Use the words in the box.

seedling  seed  shape
parents  traits  life cycle

Young plants are like their ________________ in many ways. They have many of the same _________________. For example, their leaves, petals, and flowers are the same _________________.

A seed is the beginning of the ________________ of a plant. A seed grows into a ________________ and then into an adult plant. The adult plant makes a ________________ and the life cycle starts again. Some kinds of plants have a short life cycle. They grow, live, and die in just a few weeks. For some plants the life cycle takes many years to finish.
Plants and Their Environments

Use your book to help you fill in the blanks.

How can plants change to get what they need?

1. Plant parts can move to get more ________________.

2. The stems and leaves of a plant can ________________ toward light.

3. Some plants need ________________ to grow.

4. When a seed ________________, it begins to grow.

5. The ________________ always grows down.

6. It grows toward the ________________ to get what it needs.

What traits help plants live in their environments?

7. Plants have ways to stay ________________ and get the light and water they need.
8. Some plants, like the willow tree, have very long ________________ so they can get water deep below.

9. Some plants have changed to stay ________________ from the weather.

10. On the coast, the wind is so ________________ that all the branches on the trees bend.

11. The branches grow ________________ the trunk because it protects them from the wind.

Summarize the Main Idea

12. How do plants grow and change in their environments?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Plants and Their Environments

Match each picture with the correct caption.

1. _______ Roots grow down toward the Earth.
   
   ![A tree with roots growing down](image)
   
   A.

2. _______ A tree can grow in a certain direction to protect itself from the wind.

   ![A tree growing towards the sun](image)
   
   B.

3. _______ A plant bends toward light.

   ![A plant bending towards light](image)
   
   C.

Circle the letter of the best answer.

4. What happens after a seed **germinates**?
   
   a. The seed bends.
   
   b. The seed grows.
   
   c. The seed stays safe.
   
   d. The seed dies.
Plants and Their Environments

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>germinates</th>
<th>bend</th>
<th>light</th>
</tr>
</thead>
<tbody>
<tr>
<td>down</td>
<td>weather</td>
<td>environments</td>
</tr>
</tbody>
</table>

Plants and seeds change to get what they need from their environments. The stem of a plant grows up to reach the _________________. Plants can even ________________ their stems and leaves to reach the light. Plants can also bend to stay safe from the _________________.

Seeds need light, water, and food. When a seed _________________, it begins to grow. The roots start to grow _________________ and the stems start to grow up. Plants have traits that help them live in many different _________________.

Name ____________________________ Date ____________

Chapter 1 • Plant Life Cycles
Reading and Writing in Science
Use with Lesson 4
Plants and Their Environments
The Power of Periwinkle

Read pages 58 to 59 in your textbook. Think about what might happen if most forests were cut down. Use the chart to list reasons for your prediction. Remember, a prediction is a guess based on what you already know.

<table>
<thead>
<tr>
<th>What I Know</th>
<th>What I Predict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many forests are being cut down.</td>
<td></td>
</tr>
<tr>
<td>The rosy periwinkle is a helpful plant.</td>
<td></td>
</tr>
<tr>
<td>Scientists study plants in forests all over the world.</td>
<td></td>
</tr>
</tbody>
</table>
1. What did you learn about how plants can help people?


2. Draw a picture to show one way plants help people. Write a caption for your picture.


Write About It

Predict. What might happen to helpful plants if the forests were cut down?
Plant Life Cycles

Match the words in the box to the pictures below. Write a word below each picture.

<table>
<thead>
<tr>
<th>seeds</th>
<th>stamen</th>
<th>seedling</th>
</tr>
</thead>
<tbody>
<tr>
<td>seed coat</td>
<td>pistil</td>
<td></td>
</tr>
</tbody>
</table>

1. A young plant
   - ____________

2. Takes in pollen and makes seeds
   - ____________

3. Can grow into new plants
   - ____________

4. Protects the seed
   - ____________

5. Makes pollen, a sticky powder
   - ____________
Fill in the blanks. Use words from the box.

life cycle  germinate  pistil  flowers
seed coat  trait  pollen  fruit

6. Many plants need soil so they can _____________ and grow.

7. Birds help pollen move from the stamen to the _____________.

8. All tulips share the _____________ of having petals in a cup shape.

9. Flowers lose their petals after _____________ lands on a pistil.

10. A peanut has a _____________ that protects the peanut seed.

11. A plant’s _____________ begins with a seed.

12. The _____________ on a plant forms after the petals of the flower fall off.

13. All _____________ make seeds.
Life Cycles of Animals

Fill in the important ideas as you read the chapter. Use the words in the box.

<table>
<thead>
<tr>
<th>mammal</th>
<th>dragonfly</th>
<th>reptile</th>
</tr>
</thead>
<tbody>
<tr>
<td>lobster</td>
<td>fish</td>
<td>jellyfish</td>
</tr>
<tr>
<td>bird</td>
<td>beetle</td>
<td>amphibian</td>
</tr>
</tbody>
</table>

Putting Animals into Groups

<table>
<thead>
<tr>
<th>Animal With Backbone</th>
<th>Animal Without Backbone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In Payment

Read the poem on pages 72 to 73.

Write About It

Response to Literature

1. What happens first, next, and last in this poem?

2. Why do you think the poet says that when the butterfly carries pollen to blossoms that it "sort of pays for nibbles"?

3. Where have you seen a caterpillar? Draw a picture of this place on another piece of paper.
Kinds of Animals

Use your book to help you fill in the blanks.

How do we classify animals?

1. Scientists classify animals into two main __________________________.

2. Animals with __________________________ are in one group.

3. Animals __________________________ backbones are in the other group.

4. Scientists __________________________ animals because there are so many of them.

How can we classify animals with backbones?

5. Scientists classify animals with backbones into more __________________________.

6. Mammals give __________________________ to live young.

7. Birds are the only animals with __________________________.

8. Fish have fins that help them __________________________.
How can we classify animals without backbones?

9. There are many kinds of animals that have ________________ backbones.

10. Some animals without backbones have ________________ or hard body coverings.

11. This helps them stay ________________.

12. Some animals without backbones have no ________________.

Summarize the Main Idea

13. How do we classify animals?

__________________________________________

__________________________________________

__________________________________________

__________________________________________

__________________________________________

__________________________________________

__________________________________________
Kinds of Animals

1. I have a hard outer shell. Some people may step on me anyway.
   I have six legs. What am I? ________________

2. I have smooth, moist skin.
   This helps me visit my friends in water and on land.
   What am I? ________________

3. I give birth to live young.
   I feed my young milk.
   What am I? ________________

4. I need the sunlight to stay warm.
   I am cold-blooded and have scales.
   What am I? ________________
Kinds of Animals

Fill in the blanks. Use the words in the box.

classify mammals backbones
shells reptiles gills

The world is filled with different animals. Scientists classify animals into groups to understand them better. The two biggest groups are animals with backbones and animals with no backbones. Each group has smaller groups in it, too. Animals with backbones can be mammals, fish, birds, reptiles, or amphibians. Each of these groups is different, too. Mammals feed their young milk. Birds are the only animals with feathers. Fish breathe with gills. Animals with no backbones are also different from each other. Beetles have hard shells to keep them safe. Jellyfish have no shell. They sting other animals that try to hurt them.
Mammals

Use your book to help you fill in the blanks.

How does a mammal grow and change?

1. All animals go through a __________________ cycle, just like plants.

2. Different kinds of animals have __________________ life cycles.

3. When __________________ are born, they need their mothers to live.

4. Then, the babies grow and change into __________________.

How are baby mammals and their parents alike and different?

5. Young animals can look and __________________ like their parents.

6. Sea lion pups have a tail, flippers, and fur just like their __________________.
7. Baby mammals can look __________________ from their parents.

8. Kittens can have different color __________________ and fur from their parents.

9. Sometimes the kittens look __________________ from each other, too.

10. Even though the kittens look different, they __________________ have four legs, a tail, and fur.

Summarize the Main Idea

II. How does a mammal grow and change?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Mammals

Look at the pictures that show a panda as it grows and changes. Label each picture. Use the words in the box.

1. _____________________________
2. _____________________________
3. _____________________________

4. Give the above diagram a title:

adult panda
newborn panda
young panda
Mammals

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>safe</th>
<th>sizes</th>
<th>grow</th>
<th>cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>alike</td>
<td>babies</td>
<td>adults</td>
<td></td>
</tr>
</tbody>
</table>

Mammals have a life _________________. They start as babies and grow into _________________. Mammal ________________ need their mothers to live. They need their mothers for milk. They need their mothers to keep them _________________. Mammal babies slowly ________________ until they are adults. Then they can have babies of their own. The babies and their parents will be ________________ in many ways. They may have fur just like their parents. The babies and their parents will also be different in some ways. They may be different colors or _________________. 
Meet Nancy Simmons

Remember, sequence means the order in which things happen.

Read pages 90 to 91 in your textbook. Use the graphic organizer to list the order in which bats grow.

**FIRST**

A baby bat is a __________________________.

**NEXT**

A baby bat learns to __________________________.

**LAST**

A young bat __________________________ its mother.
Read the article again. Fill in the facts about bat pups.

Bats have ______________________ baby at a time.

A baby bat is called a ______________________.

The pup gets milk from its ______________________.

Baby bats stay safe by ______________________ on to their mothers. Soon, the bat pup grows bigger. It learns to ______________________.

Write About It
Find the main idea. How do bats grow and change?
Animals from Eggs

Use your book to help you fill in the blanks.

Why do many animals lay eggs?

1. Birds are not the only animals that _______________ eggs.

2. Reptiles, amphibians, and _______________ all lay eggs.

3. Animals lay many eggs because some of their babies will not _______________.

4. Many animals that lay eggs do not take _______________ of their young.

5. Female sea turtles come on to the shore and _______________ holes.

6. When the _______________ hatch, the young must find their own way to the ocean.

How do animals from eggs become adults?

7. Many eggs have an outside _______________ or covering that keeps the growing animal inside safe.

8. After the animal is fully formed, it _______________ from the egg.
How does a butterfly grow and change?

9. Butterflies begin life looking very different from their ____________________.

10. They go through four ____________________ as they grow into adults.

11. Butterflies lay their eggs on ____________________ or branches.

12. After ten days, the egg hatches and a ____________________ comes out.

13. Inside the pupa, the caterpillar changes into a ____________________.

Summarize the Main Idea

14. Why do many animals lay eggs?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Animals from Eggs

Match each word in the left column with a sentence on the right. Write the correct letter on the line.

1. ______ larva  A. A young crab sheds its shell.
2. ______ molts  B. A hard case that a caterpillar forms around itself.
3. ______ pupa  C. It comes out after an egg hatches.

4. Put the stages of a butterfly’s life in the right order. Write numbers 1 to 4 on the lines.
   Pupa ______
   Caterpillar ______
   Butterfly ______
   Egg ______
Some animals lay ____________________ . Fish, reptiles, and insects lay eggs. They often lay many eggs because some of the babies will die. Many animals that lay eggs do not stay to ____________________ for their young. The young must live on their own after they ____________________ . Some animals that hatch from eggs go through many changes before they are adults. Each change is called a ____________________ . The first stage is the egg. The egg keeps the young animal safe. The next stage is often the ____________________ . For a butterfly, the larva is a caterpillar. The next stage for a butterfly is the ____________________ . The last stage is when the animal grows into an adult. Some animals have to change skins to become adults. A crab ____________________ or sheds its shell so it can grow a bigger one.
Animal Traits

Use your book to help you fill in the blanks.

How do traits help animals?

1. All animals have special ________________ that help them live in their environments.

2. These traits can be their ________________, their body parts, or the way they act.

3. Animals use their traits to stay ________________.

4. Another way animals stay safe is by ________________ off other animals.

5. The bites of some snakes and spiders can be ________________.

What is a population?

6. A population is a ________________ of the same kind of animal that lives near each other.

7. For example, the black bears that live in Yosemite National Park are one ________________.
8. Animals in different populations do not always look the _________________.

9. Since populations live in different places, the animals can change in different ways to live in their _________________.

How can we compare animals in the same population?

10. Animals in the same population may look and ________________ differently from each other.

11. Some meerkats are ________________ than others.

12. Even though meerkats can ________________ and act differently, they share many traits.

13. They all eat ________________ and grubs.

Summarize the Main Idea

14. How do traits help animals?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Animal Traits

Read the sentences. Write *population* if the sentence tells something about an animal population. Write *traits* if the sentence tells something about animal traits.

1. Some snakes and spiders have poisonous bites to keep other animals away.
   
   _________________

2. Giraffes have long necks to reach food high in trees.
   
   _________________

   
   _________________

   
   _________________

5. Male peacocks have bright feathers and sing songs to help them find partners.
   
   _________________
Animals are alike and ________________ in many ways. All bears are ________________. They have the same ________________, such as fur, four legs, and claws. Meerkats are like other meerkats. They eat insects and have long claws for _________________. Traits help animals stay safe and find partners. Tortoises have hard ________________ to stay safe. Birds sing pretty songs to find partners. Traits also help animals live in their _________________. A group of the same kind of animal that lives near one another is called a _________________. Black bear populations can be found in California, Maine, and Alaska.
Helpful Traits

**Write About It**

Describe one of the animals in the pictures on page 110. Where does it live? What do you think it eats? What traits help it live in its environment?

**Getting Ready**

Choose one of the animals from the pictures on page 110. Find out more about it. Write facts and details in the chart below.

<table>
<thead>
<tr>
<th>ANIMAL</th>
<th>What It Looks Like</th>
<th>Where It Lives</th>
<th>What It Eats</th>
<th>Special Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Drafting

A topic sentence tells the main idea. Write a topic sentence for your paragraph.

________________________________________________________________________

________________________________________________________________________

Write two sentences describing the animal you chose. Show how the animal can live in its environment.

1. ______________________________________________________________________

________________________________________________________________________

2. ______________________________________________________________________

________________________________________________________________________

Revising and Proofreading

Describing words tell how something looks, sounds, tastes, smells, or feels.

• Did I begin with a topic sentence?
• Did I describe the animal?
• Did I show how it lives in its environment?
Life Cycles of Animals

Match the word in the left column with a meaning in the right column. Write the correct letter on the line.

1. pupa  A. Feed their young milk
2. mammal  B. When an animal sheds its shell
3. molting  C. What a caterpillar is
4. larva  D. Has scales and is cold-blooded
5. amphibian  E. Begins life in water; lives in water and on land later in life
6. reptile  F. The hard case a caterpillar forms around itself
Unscramble the bold word in each sentence. Write the word correctly on the line. Use the words in the box.

7. A group of zebras that lives in the same place is a noippuoalt.
   ___________________________________________

8. Both crabs and butterflies are vaalr before they are adults.
   ___________________________________________

9. A crab tsoml when it grows too big for its shell.
   ___________________________________________

10. The ways an animal looks and acts like its parents are called strati.
    __________________________________________

II. Inside a aupp, a caterpillar grows into a butterfly.
    __________________________________________
Earth’s Materials

Fill in the important ideas as you read the chapter. Use the words in the box.

- hardness
- texture
- rock slides
- tiny rocks
- luster
- water
- animals
- wind
- plant roots
- color
- earthquakes
- plants

What do you know about rocks and soil?

How do geologists describe rocks?

What is in soil?

What can change rocks?
Under a Stone

Read the poem on pages 128 to 129.

Write About It

Response to Literature

1. What else could you find under a rock?

   ______________________________________
   ______________________________________
   ______________________________________

2. What do you think is the village that the poet found under the rock? Use the poem to tell how you know.

   ______________________________________
   ______________________________________
   ______________________________________

3. Why shouldn’t you turn over stones?

   ______________________________________
   ______________________________________
   ______________________________________
Rocks

Use your book to help you fill in the blanks.

How can we describe rocks?

1. Geologists _________________ rocks to identify different types.

2. One thing they look at is the _________________ of the rock.

3. Most rocks are _________________.

4. Scientists look at the _________________ of rocks, too.

What are rocks made of?

5. All rocks are made of _________________.

6. Granite is made up of _________________ minerals.

7. The gray parts of granite are _________________.

8. Plants use the minerals in _________________ to help them grow.

9. We get minerals from the _________________ we eat.
How can we describe minerals?

10. A __________________________ tells you something about an object.

11. Color is one property of a __________________________.

12. Geologists use the word __________________________ to describe how a mineral looks when light shines on it.

13. Another property of a mineral is its __________________________.

Summarize the Main Idea

14. How can scientists learn about rocks?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Rocks

Fill in the blanks. Use the words from the box.

1. A scientist who studies rocks is called a ____________________.

2. Quartz, mica, and feldspar are all ____________________.

3. Hardness is one ____________________ of a mineral.

4. How a mineral looks when light shines on it is called ____________________.

The words in the left column tell you about a property of a mineral. Draw a line to the correct property on the right.

5. light shining on quartz      hardness

6. someone scratching talc      color

7. a group of rocks black to nearly white      luster
Rocks

Fill in the blanks. Use the words from the box.

- geologist
- minerals
- property
- luster
- hardness
- color
- texture
- size

Scientists who study rocks are called _________________. They can look at a rock’s _________________ to learn more about it. When a light shines on a rock, they can study its _________________. They can scratch a rock to study its _________________. Many rocks are the _________________ gray. By feeling a rock, you can tell if it has a rough or a smooth _________________. A rock can be very small in _________________, but very heavy. Granite is made up of the _________________.

feldspar, quartz, and mica.
Rocks Change

Use your book to help you fill in the blanks.

How do rocks change?

1. The way water and wind change rock is called ____________________ .

2. When ____________________ gets into the cracks of rocks, it can freeze and push against the rocks.

3. When rocks slide down a hill, they may ____________________ and become smaller.

4. The smaller rocks can then break down into ____________________ .

What other ways can rocks change?

5. Earthquakes can change ____________________ , too.

6. When ____________________ shakes, rocks rub against each other.
7. Plants can grow in soil inside the ________________ of rocks.

8. Sometimes, the ________________ are so strong they cause the rocks to break.

9. You know that rocks are made of ________________.

10. Water can cause some minerals to ________________.

Summarize the Main Idea

II. How can rocks change?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Rocks Change

Use the words from the box to fill in the crossword puzzle.

Across

1. It is the way water and wind changes rocks.
3. When it freezes, it pushes against rocks.
5. It grows in soil.
6. Rocks are made of them.

Down

1. It can blow sand against rocks.
2. It makes the Earth shake.
4. They are parts of plants.

Vocabulary

water
roots
minerals
plant
wind
weathering
earthquake
Rocks can be changed by _____________. When _____________ freezes in the cracks of rocks, it can push against the rocks. This makes the cracks bigger and the rocks will _____________. Another kind of weathering can be caused by the _____________. Strong winds can blow _____________ against rocks. This makes the rocks break into smaller pieces. Rocks can also change from the shaking of an _____________. When rocks _____________ down a hill, they become smaller. The _____________ inside rocks can also change. Water can make a rock with iron in it turn to _____________.

| weathering | minerals | rust |
| water      | earthquake | sand |
| wind       | break      | slide |
Writing in Science

Write About It
Write a letter to a friend. Write about your walk. Describe the rocks you saw. Explain how you think they got their shapes.

Getting Ready
Use the cluster chart below. Write the names of the rocks you saw in the gray circles. Write details about the rocks in the outer circles.
Drafting

A friendly letter has a special form. Write a letter to a friend describing the rocks you saw.

Dear _______________, Greeting

Body (Write your message to your friend.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

_______________ , Closing

(Write words like “Your Friend.”)

_______________ Sign your name.

Revising and Proofreading

A letter shares news with someone.

• Did I include details to describe the rocks?
• Did I explain how I think they got their shape?
• Did I correct all grammar mistakes?
Rocks Rule!

Read the article on pages 148 to 149 in your textbook. Think about how scientists compare and contrast the rocks they study.

Remember: When you compare and contrast, you look at how things are the same and how they are different.

I. Look at the pictures below of tools. Compare how a geologist uses each tool.

hand lens

rock hammer
Write About It

1. **Compare and Contrast.** How are a beach rock and azurite alike and different?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. **Compare and Contrast.** Write three sentences that tell how geologists study rocks. Discuss how the way geologists observe rocks compares to how you observe rocks.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Soil

Use your book to help you fill in the blanks.

What is in soil?

1. Soil is made of tiny ______________ and bits of plants and animals.

2. Weathering makes large rocks ______________ down into smaller rocks.

3. They become part of the ______________.

4. Plants take in ______________ from the soil to grow.

5. People and ______________ need minerals to grow, too.

What are some kinds of soil?

6. Did you know that there are different ______________ of soil?

7. The ______________ in the rocks give these soils their color.

8. Most plants ______________ best in topsoil.

9. There are many ______________ in topsoil.
How do animals help soil?

10. Animals that live in the soil help make the soil better for the ________________ that grow in it.

11. When they ________________, they mix the soil.

12. When animals die, their ________________ break down.

13. They become part of the ________________.

Summarize the Main idea

14. What is soil?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Soil

Use the words from the box to find the correct answer for each clue. Write the word on the line. Circle it in the puzzle.

<table>
<thead>
<tr>
<th>tunnels</th>
<th>soil</th>
<th>rot</th>
<th>topsoil</th>
<th>minerals</th>
</tr>
</thead>
</table>

1. A mix of tiny rocks and pieces of dead plants and animals

2. Plants grow best in it.

3. To break down and become part of the soil

4. Soil gets its color from these.

5. When animals dig these, it mixes the soil.

ZW Y Z H BU P Z T
VV VR RRR YP Q O
Z QQ OV V V Y H P
XS W TU N NELS
XOYY ZHVL PO
MINERAL S Z I
XLHQQZPL

© Macmillan/McGraw-Hill

Chapter 3 • Earth’s Materials
Reading and Writing in Science
Use with Lesson 3
Soil
Soil

Fill in the blanks. Use the words from the box.

rocks  plants  colors
soil   iron   minerals

Plants, animals, people, and soil help each other.
After plants and animals die, they begin to rot and
become part of the _________________.
The _________________ in soil help plants grow.
People and animals eat _________________, which
gives them minerals to grow, too.

There are different kinds of soil, and they can come
in different _________________. The minerals from
_______________ give soils their color. Clay soil
gets its color from the mineral _________________.

Name ___________________________  Date _____________
# Earth’s Materials

<table>
<thead>
<tr>
<th>geologist</th>
<th>luster</th>
<th>weathering</th>
</tr>
</thead>
<tbody>
<tr>
<td>mineral</td>
<td>hardness</td>
<td></td>
</tr>
<tr>
<td>property</td>
<td>soil</td>
<td></td>
</tr>
</tbody>
</table>

Circle the vocabulary words hidden in the puzzle. Use the words in the box. Look across and down. The word soil is used two times.

```

<table>
<thead>
<tr>
<th>y</th>
<th>g</th>
<th>p</th>
<th>r</th>
<th>o</th>
<th>p</th>
<th>e</th>
<th>r</th>
<th>t</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>e</td>
<td>o</td>
<td>l</td>
<td>o</td>
<td>g</td>
<td>i</td>
<td>s</td>
<td>t</td>
<td>c</td>
</tr>
<tr>
<td>s</td>
<td>l</td>
<td>u</td>
<td>z</td>
<td>p</td>
<td>l</td>
<td>l</td>
<td>o</td>
<td>g</td>
<td>e</td>
</tr>
<tr>
<td>o</td>
<td>u</td>
<td>i</td>
<td>i</td>
<td>n</td>
<td>u</td>
<td>p</td>
<td>i</td>
<td>e</td>
<td>w</td>
</tr>
<tr>
<td>i</td>
<td>s</td>
<td>d</td>
<td>z</td>
<td>s</td>
<td>s</td>
<td>a</td>
<td>l</td>
<td>o</td>
<td>e</td>
</tr>
<tr>
<td>l</td>
<td>t</td>
<td>h</td>
<td>a</td>
<td>r</td>
<td>d</td>
<td>n</td>
<td>e</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>w</td>
<td>e</td>
<td>a</td>
<td>t</td>
<td>h</td>
<td>e</td>
<td>r</td>
<td>i</td>
<td>n</td>
<td>g</td>
</tr>
<tr>
<td>h</td>
<td>r</td>
<td>m</td>
<td>i</td>
<td>n</td>
<td>e</td>
<td>r</td>
<td>a</td>
<td>l</td>
<td>j</td>
</tr>
</tbody>
</table>
```
Earth’s Materials

Choose the word that best completes each sentence. Write it on the line.

1. Use the word (texture, luster) to tell how a mineral looks when light shines on it. ______________

2. Geologists test the (hardness, luster) of rocks to see how tough the rocks are. ______________

3. Color is a (property, texture) of minerals. ______________

4. A person who studies rocks is called a (geologist, mineral). ______________

5. Some soils get color from the (hardness, minerals) in them. ______________

6. Plants get nutrients, or food, from the (properties, soil) where they grow. ______________

7. Ocean waves and wind both can cause rocks to change in a process called (weathering, growing). ______________
Earth’s Past

Fill in the important ideas as you read the chapter. Use the words in the box.

Kinds of Fossils

- prints
- petrified wood
- teeth
- tar
- amber
- ice
- skeleton
- kinds of animals
- rock
- size of animals
- weather
- the land

What do you know about fossils?

Places to Find Fossils

Clues from Fossils
Dinosaur Bone

Read the poem on pages 172 to 173.

Write About It

Response to Literature

1. What do you think a dinosaur bone can tell about a dinosaur?

________________________________________________________________________

________________________________________________________________________

2. Why do you think the poet is asking questions about the dinosaur bone? What does she want to learn? Tell how you know.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Ask your own question about the dinosaur bone. What would you like to know?

________________________________________________________________________
Fossils

Use your book to help you fill in the blanks.

What are fossils?

1. A fossil is what is left of a living thing from the ________________.

2. Some fossils are ________________ or teeth of animals that lived long ago.

3. Other fossils are ________________ of whole plants and animals.

4. Scientists find ________________ of plants and animals in many places.

5. Some are found in ________________.

6. Others can be found in ________________, tar, or amber.
How do fossils form?

7. Fossils form when living things are ________________ under many layers of sand or mud.

8. Scientists can tell how ________________ a fossil is by looking at the layers.

9. Some fossils are found in the same ________________ .

Summarize the Main Idea

10. What are fossils?

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________
Fossils

Look at each picture. Write True if the picture shows a fossil. Write False if the picture does NOT show a fossil.

1. ________________ 2. ________________

3. ________________ 4. ________________

5. What is a fossil?
Fossils

Fill in the blanks. Use the words from the box.

<table>
<thead>
<tr>
<th>observing</th>
<th>plants</th>
<th>fossils</th>
<th>life</th>
</tr>
</thead>
<tbody>
<tr>
<td>trees</td>
<td>rocks</td>
<td>animals</td>
<td>amber</td>
</tr>
</tbody>
</table>

Some ________________ are bones and teeth. They come from ________________ that died long ago. Scientists may find them in ice, tar, or ________________. It is the sticky liquid inside ________________ that has become fossilized over time. Some fossils show whole ________________ or animals. Scientists often find these fossils in ________________.

Scientists can tell how old a fossil is by ________________ the rock layers. Scientists study fossils to learn about ________________ long ago.
Writing in Science

Write About It

Write a report about your dinosaur. Tell where the dinosaur lived and how it moved. What did it eat? Draw a picture of your dinosaur. Share your report with the class.

Getting Ready

Use the chart below. Find information about a dinosaur. Write the facts and details you found out.

<table>
<thead>
<tr>
<th>Dinosaur</th>
<th>What I Know</th>
<th>What I Want to Know</th>
<th>What I Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Writing

Drafting

Write a topic sentence for your report. It should tell your main idea about your dinosaur.

______________________________________

______________________________________

Write three facts and details you want to include about your dinosaur. Make sure they back up your main idea.

1. ______________________________________

______________________________________

2. ______________________________________

______________________________________

3. ______________________________________

______________________________________

Now on another piece of paper write your report about your dinosaur. Start with your topic sentence. Include facts and details you found. Draw a picture.

Revising and Proofreading

• Did I begin with a topic sentence?
• Did I include facts and details about my dinosaur?
• Did I correct all grammar mistakes?
Finding Clues in Fossils

How can fossils help us learn about the past?

1. The fossils give _________________ about what life was like long ago.

2. For example, animal fossils tell about what kinds of _________________ roamed the Earth.

3. These fossils also tell about what the _________________ might have looked like.

4. By studying fossils, _________________ have learned that the weather was different millions of years ago.

5. In Antarctica, scientists have found plant fossils under the _________________.

What can fossils teach us about extinct animals?

6. When a living thing is _________________, it has died out.

7. Some plants and animals become extinct because of _________________.

© Macmillan/McGraw-Hill
8. Paleontologists can find ________________ bones and put them together.

9. Scientists can learn about the animal’s ________________.

10. They can tell how it may have ________________.

Summarize the Main Idea

II. How do fossils help scientists learn about the past?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Finding Clues in Fossils

Tell which picture answers each question.

1. Which picture shows a kind of animal that is extinct?

2. Which picture shows a paleontologist at work?

3. Which picture shows a skeleton?
Finding Clues in Fossils

Fill in the blanks. Use the words from the box.

<table>
<thead>
<tr>
<th>plant</th>
<th>weather</th>
<th>paleontologists</th>
<th>fossils</th>
</tr>
</thead>
<tbody>
<tr>
<td>animal</td>
<td>extinct</td>
<td>walked</td>
<td>skeleton</td>
</tr>
</tbody>
</table>

Long ago, animals may have become ________________ because of disease or big changes on Earth. Scientists learn about the past by studying ______________ left behind by these extinct animals. Sometimes scientists can put many fossil bones together into a ______________. Then they can see how big an animal from long ago was. They can also tell if the animals ______________ on two legs or four legs.

The scientists who study fossils are called ______________. They look at ______________ fossils to see what kinds of animals lived long ago. They look at ______________ fossils to see what kinds of plants lived. Fossils also tell paleontologists what the land and the ______________ was like.
Fossils of California

Use your book to help you fill in the blanks.

What are the La Brea Tar Pits?

1. At Rancho La Brea in California, thick ________________ comes up from the Earth.

2. Scientists have found about 3 million ________________ of plants and animals in the pits.

3. Scientists think that the weather used to be ________________ and ________________ because they have found fossils of frogs and turtles.

4. Paleontologists have also found fossils of seeds, leaves, and ________________.

5. Today asphalt still comes up from Earth and plants and animals get ________________ in the pits.
What other fossils are found in California?

6. The Lambeosaurus was a duck-billed ____________ that lived 76 million years ago.

7. Its ____________ were found in Baja, California, a part of Mexico.

8. Another type of fossil is petrified ________________.

9. Trees that are covered by water, mud, and ash slowly turn to ________________.

10. Scientists can observe the ________________ in petrified wood to tell how old it is.

Summarize the Main Idea

II. How have fossils helped scientists learn about California’s past?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
Fossils of California

Read each riddle. Write one of the words from the box to answer each riddle.

1. I am black and sticky, just like tar.
   
   What am I?  
   ______________________

2. I am an animal that lived a long time ago. Some people say I look like a pet they have.
   
   What am I? ______________________

3. I am a dinosaur with a duck bill and a bony crest.
   
   What am I? ______________________

4. I am a short dinosaur covered with bony plates.
   
   What am I? ______________________

5. I was a tree that turned into stone.
   
   What am I? ______________________
Fossils of California

Fill in the blanks. Use the words from the box.

asphalt  duck-billed  fossils
cones      weather      petrified

At the La Brea Tar Pits, scientists have found ________________ of mammoths, frogs, and turtles. The animals were caught in the ________________ that fills the tar pits. Frog and turtle fossils tell scientists that once the ________________ was warm and humid at the tar pits. Seeds, leaves, and ________________ are some of the plant fossils found at the tar pits.

In Baja, California, scientists found the Lambeosaurus, a ________________ dinosaur. They have discovered really old wood that was ________________ under water, mud, and ash. These fossils of wood feel like stone.
Meet Mike Novacek

Read the article on pages 198 to 199 in your textbook. Think about how Mike and his team classify the fossils they find. Remember, when you classify and categorize, you put things that are alike into groups.

1. Mike has collected fossils of reptiles, mammals, and dinosaurs. What kinds of animals might you find in each group? Fill in the chart below with animals you have learned about.

2. Where would you place the fossil of the Kryptobaatar skull in the chart below?

<table>
<thead>
<tr>
<th>Fossils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reptile</td>
</tr>
<tr>
<td>Mammal</td>
</tr>
<tr>
<td>Dinosaur</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reptile</th>
<th>Mammal</th>
<th>Dinosaur</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Write About It

1. **Classify.** How can you put fossils into groups?

   [Blank space for response]

   [Blank space for response]

   [Blank space for response]

2. Why do you think scientists travel around the world looking for fossils?

   [Blank space for response]

   [Blank space for response]

   [Blank space for response]

3. What was surprising about finding Kryptobaatar fossils in the Gobi Desert?

   [Blank space for response]

   [Blank space for response]

   [Blank space for response]
Earth’s Past

Choose the picture that best answers each question. Write the letter of the picture on the line.

_______ 1. Which picture shows a plant fossil?

_______ 2. Which picture shows something that is extinct?

_______ 3. Which picture shows a paleontologist at work?

_______ 4. Which picture shows a fish skeleton?
Earth’s Past

Choose the letter of the best answer.

1. What do you call a scientist who studies fossils?
   a. paleontologist       b. skeleton
   c. petrified           d. geologist

2. What is an animal that has died out and cannot be found living anywhere on Earth?
   a. lost                b. extinct
   c. alive              d. petrified

3. What is a full set of bones called?
   a. tar                b. amber
   c. mineral           d. skeleton

4. What is petrified wood?
   a. amber            b. skeleton
   c. fossil          d. scientist
Earth’s Resources

Fill in the important ideas as you read the chapter. Use the words in the box. You will use some words more than once.

<table>
<thead>
<tr>
<th>drink</th>
<th>work</th>
<th>grow plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>energy</td>
<td>fuel</td>
<td>wood and paper</td>
</tr>
</tbody>
</table>

Way to Use Rocks and Soil

What Are Natural Resources?

Ways to Use Plants

Way to Use Wind

Ways to Use the Sun

Ways to Use Animals

Ways to Use Water

© Macmillan/McGraw-Hill
Sun

Read the poem on pages 212 to 213.

Write About It

Response to Literature

1. How do we use the warmth from the Sun? Make a poster.

2. What do you think the poet means when she says that the Sun will "lie down" on the floor? Tell how you know.

3. How is the cat using the Sun in the poem? Use the poem to tell how you know.
Natural Resources

Use your book to help you fill in the blanks.

What are natural resources?

1. A natural resource is something from ____________ that people use.

2. Rocks, minerals, ____________, soil, and water are natural resources.

3. We use natural resources to make things we ____________ every day.

4. Your shirt might be made of cotton, which comes from a ____________.

How do we use rocks and soil?

5. Rocks and ________________ are natural resources.

6. Rocks break down into soil, and plants use the soil to ____________.

7. We need plants for ________________ and to make things such as paper and clothes.

8. We also use rocks to ________________ homes.
9. We use the _________________ in sand to make glass.

10. We even _________________ some minerals.

**How do we use water and wind?**

11. Water and _________________ are natural resources, too.

12. We use water to _________________, cook, and clean.

13. We also use water for _________________.

14. Like water, wind can also make electric _________________.

**Summarize the Main Idea**

15. How do people use natural resources?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Natural Resources

Read each word in the puzzle. One word has two colors.

1. If the word tells something that is made from rocks or minerals, color it gray.

2. If the word tells something that is made from plants, color it green.

3. If the word tells how we use wind or water, color it blue.

<table>
<thead>
<tr>
<th>Wood desk</th>
<th>Soil</th>
<th>Pencil graphite</th>
<th>Heat</th>
<th>Cooking</th>
<th>Pencil eraser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn cereal</td>
<td>Paper</td>
<td>Jewelry</td>
<td>Energy</td>
<td>Glass</td>
<td>Cleaning</td>
</tr>
<tr>
<td>Cotton shirt</td>
<td>Drinking</td>
<td>Sand</td>
<td>Sidewalk</td>
<td>Electric power</td>
<td>Concrete</td>
</tr>
</tbody>
</table>

4. Where can you find natural resources?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Rocks, plants, minerals, soil, water, and wind are ______________ resources. People use natural resources every ________________ . They use _______________ as food or to make clothes. They use rocks and minerals to ________________ homes. People even eat some ________________ , such as salt! Water and wind help people make ________________ . When water and wind move, they can make ________________ power. Water also helps people with everyday life. They use it to ________________ , to wash, and to grow plants. Sometimes people even use many resources together. It takes rocks, sand, and water to make ________________ .
Plant and Animal Resources
Use your book to help you fill in the blanks.

How do we use plants?

1. Plants are some of our most important ____________________.

2. Things like clothes and rugs come from ______________________ plants.

3. Some plants are used to make ____________________________.

4. We use trees to make ____________________________, furniture, and paper.

5. Foods like nuts, popcorn, and sugar all come from ____________________________.

6. The ____________________________ of some plants are called grains.

7. Grains can be ground into ____________________________, which is used to make cereal and bread.
How do we use animals?

8. Animals are natural ________________, too.

9. Many people eat beef, ________________, fish, and other animals.

10. Leather is made from the ________________ of animals.

11. Long ago coal and oil formed underground from the ________________ of dead plants and animals.

12. Now we use coal and oil to cook and to ________________ our homes.

Summarize the Main Idea

13. How do people use plant and animal natural resources?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Plant and Animal Resources

What kind of resource was used to make the things shown in each picture?

Write the name of the resource from the box on the line next to each picture.

1. ________________

2. ________________

3. ________________

4. ________________

5. Which picture shows fuel? What does fuel do?

__________________________
Plant and Animal Resources

Fill in the blanks. Use the words from the box.

<table>
<thead>
<tr>
<th>fuel</th>
<th>resource</th>
<th>natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>work</td>
<td>heat</td>
<td>cheese</td>
</tr>
<tr>
<td>clothing</td>
<td>grains</td>
<td>sap</td>
</tr>
</tbody>
</table>

Plants are an important natural __________________________. Animals are also an important __________________________ resource. People eat some plants or use them to make __________________________ like cotton pants. You might eat bread made from __________________________. You might even take medicine made from the __________________________ of an aloe plant. People eat chicken, fish, __________________________, and butter, which are made from animals. Animals also help people do __________________________ on farms and in cities. Long after they die, the remains of plants and animals can be made into __________________________. A fuel gives us __________________________ and makes our cars go.
A World of Wool

Read pages 232 to 233 in your textbook. Think about the most important ideas as you read. Use the chart below to list the important ideas. Then tell those ideas in your own words.

Remember, when you summarize, you retell the most important ideas from the reading selection.

<table>
<thead>
<tr>
<th>Idea #1</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Idea #2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Idea #3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Write About It

Summarize  Tell what you learned about llama wool. Try to use these words: cold, warm, sweaters, llamas, camels, fur, spin, yarn, clothes, Andes Mountains.
Resources of California

Use your book to help you fill in the blanks.

How does California get energy?

1. People in California use water, wind, and oil to make _______________ power.

2. People also use _______________ from the Sun.

3. This is called _______________ power.

4. In California, there is natural _______________ under the ground.

5. Some people _______________ natural gas for energy, just like coal and oil.

6. They can use natural gas to _______________ food and to heat their homes.

What are other natural resources of California?

7. California is sunny and warm, and the _______________ is filled with minerals.

8. The state is a great place to _______________ plants.
9. People all over the country eat fruits and ________________ from the Golden State.

10. There are many other ________________ resources in California, too.

II. People mine for gravel, clay, and ________________.

12. People also mine for ________________.

Summarize the Main Idea

13. What are some of California’s natural resources?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Resources of California

Find the correct word for each definition. Write the correct word on the line. Use the words in the box.

1. Plants grown for food
   __________________________

2. To take rocks and minerals out of the ground
   __________________________

3. To use light from the Sun for energy
   __________________________

4. Fuel found under the ground
   __________________________

Circle the letter of the best answer.

5. Why do some people put solar panels on their roofs?
   a. to heat their homes
   b. to drive cars
   c. to grow crops
   d. to find silver and gold
Resources of California

Fill in the blanks. Use the words from the box.

<table>
<thead>
<tr>
<th>crops</th>
<th>ground</th>
<th>solar</th>
<th>energy</th>
<th>resources</th>
</tr>
</thead>
</table>

California has many natural _________________. It has warm, sunny weather and good soil so farmers in California can grow many _________________. When you eat an orange, it may come from California. People in California also take important natural resources from under the _________________. They _________________ for gravel, clay, and silver. They also take natural gas from under the ground for _________________. You can use natural gas to make heat for cooking or to keep warm. In California, another way to keep warm is with heat from _________________ power. Machines turn this energy from the _________________ into electric power to run cars and heat homes.
Writing in Science

Write About It

Why is California a good place to use solar power? Write a paragraph. Describe solar power and explain how people can use it.

Getting Ready

Find out more about solar power. Write facts and details in the chart below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Drafting

A topic sentence tells the main idea. Write a topic sentence for your paragraph about solar power.

________________________________________

________________________________________

Write three facts you could include in your paragraph about solar power.

1. ______________________________________

   ______________________________________

2. ______________________________________

   ______________________________________

3. ______________________________________

   ______________________________________

Now on another piece of paper write your paragraph. Begin with your topic sentence. Include your facts and details about solar power. Tell why California is a good place to use solar power.

Revising and Proofreading

• Did I include facts and details about solar power?

• Did I correct all spelling, punctuation, and capital letter mistakes?
Earth’s Resources

Match the words and the pictures. Write the letter of the resource that matches each picture on the line.

1. [Image of bread]  
   a. mineral resource
   _______

2. [Image of gas pump]  
   b. wind power
   _______

3. [Image of windmills]  
   c. plant resource
   _______

4. [Image of solar panels]  
   d. solar power
   _______

5. [Image of diamonds]  
   e. fuel
   _______

6. What is used to make all the things in the pictures?
   ______________________
Find the correct word in the box for each definition or clue. Write the word on the line.

<table>
<thead>
<tr>
<th>fuel</th>
<th>energy</th>
<th>mine</th>
<th>concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>crops</td>
<td>solar power</td>
<td>natural resource</td>
<td></td>
</tr>
</tbody>
</table>

7. Power from the Sun
   ______________________

8. People do this to get gold, sand, and clay
   ______________________

9. Plants people grow to eat, like walnuts
   ______________________

10. Wind power, water power, and solar power are this
    ______________________

11. Rocks, sand, and water all mixed together
    ______________________

12. Something from Earth that people use
    ______________________

13. It gives off heat when you burn it
    ______________________
Objects in Motion

Fill in the important ideas as you read the chapter. Use the words in the box to fill in the chart below.

<table>
<thead>
<tr>
<th>motion</th>
<th>position</th>
<th>push</th>
<th>friction</th>
</tr>
</thead>
<tbody>
<tr>
<td>speed</td>
<td>distance</td>
<td>pull</td>
<td></td>
</tr>
</tbody>
</table>

Ways to Describe Objects

<table>
<thead>
<tr>
<th>Where an Object Is</th>
<th>How to Tell If an Object Is Moving</th>
<th>How to Move or Stop an Object</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If

Read the poem on page 258.

Write About It

Response to Literature

1. What do you think the machine in the poem could do? Draw a picture of it.

2. What is the poet doing to the machine he is writing about? Use the poem to tell how you know.

3. What are some machines people use every day?

Position

Use your book to help you fill in the blanks.

How can you describe where something is?

1. Position is the ________________ where something is.

2. You can tell the position of an object by comparing it to something that does not ________________.

3. You can use words such as above, below, left, right, near, far, next to, in, on, and under to ________________ position.

4. When something ________________, its position changes.

5. You can describe its new position by ________________ it to other objects.

How do you measure distance?

6. Distance is how far away one thing is from ________________.

7. One way you can measure distance is by using a ________________.
8. You can use units such as inches, feet, and miles to measure distance.

9. You can also use units such as centimeters, meters, and kilometers.

Summarize the Main Idea

10. How can you tell where objects are?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Position

Read each word below. Write P if the word tells about position. Write D if the word tells about distance. One word tells about both.

1. ______ above
2. ______ map
3. ______ inches
4. ______ right
5. ______ left
6. ______ centimeters
7. ______ ruler
8. ______ under

Fill in the blanks. Use the words position or distance.

9. You can measure ____________________ with a ruler.
10. The words top, bottom, and side can be used to tell about the ____________________ of something.
Position

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>distance</th>
<th>position</th>
<th>far</th>
</tr>
</thead>
<tbody>
<tr>
<td>move</td>
<td>units</td>
<td>measure</td>
</tr>
</tbody>
</table>

You can describe where an object is by its position and ________________ . An object’s position is where it is compared to objects that don’t ________________ . When you tell about ________________, you use words such as above, next to, or under. You can also describe distance. An object’s distance is how ________________ it is from other objects. A map or a ruler can ________________ distance. Distance is measured in ________________ such as inches or meters.
Motion

Use your book to help you fill in the blanks.

How can you tell if something has moved?

1. All around you, things ____________________ .

2. When something moves, it starts from one ____________________ .

3. Then it ____________________ in another position.

4. You can see how the position ____________________ .

5. When something is moving, we say it is in ____________________ .

6. Motion is a change in ____________________ .

What is speed?

7. An Olympic runner can ____________________ 1 mile in just 5 minutes or less!

8. Speed is how ____________________ something moves in a certain amount of time.
Summarize the Main Idea

9. How can you describe the way things move?
Motion

Tell which picture answers each question.

1. Which picture shows someone moving at a fast speed?
   - A

2. Which picture shows someone moving at a slower speed?
   - B

3. Which picture shows someone moving at the slowest speed?
   - C

Fill in the blank.

4. Speed describes how something moves in a certain amount of ___.
Motion

Fill in the blanks. Use the words in the box.

starts  ends  fast  slow
change  motion  speed

When a car goes from one town to another, it is in _________________. When people clap their hands, the hands are in motion, too. Motion is a ________________ in position. When something moves, it ________________ in one position. Then it ________________ in another position.

The ________________ of something tells how fast it is moving in a certain time. When something takes a short time to move, it is _________________. When something takes a long time to move, it is ________________.
Pushes and Pulls

Use your book to help you fill in the blanks.

What are forces?

1. Things can not ________________ on their own.

2. You have to use a ________________ to put something in motion.

3. When you play soccer, you kick the ball to ________________ it across the field.

4. A push or a ________________ is called a force.

5. If you push something, it will move ________________ from you.

6. If you pull something, it will move ________________ to you.

What happens when a force changes?

7. When you use more force, things move ________________ and go farther.

8. When you use less force, things move ________________ and do not go as far.
9. You have to use more force to move something __________________________.

10. Some objects are so heavy that people use hand carts, trucks, or ____________________________ to move them.

**Summarize the Main Idea**

II. How can you move things?

__________________________________________

__________________________________________

__________________________________________

__________________________________________

__________________________________________

__________________________________________
Pushes and Pulls

Look at the pictures. Write *push* under each picture that shows a push. Write *pull* under each picture that shows a pull.

1. ____________________________ 2. ____________________________

3. ____________________________ 4. ____________________________

Fill in the blank.

5. A push and a pull are both a kind of ____________________________.
Pushes and Pulls

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>farther</th>
<th>away</th>
<th>closer</th>
<th>heavy</th>
</tr>
</thead>
<tbody>
<tr>
<td>push</td>
<td>pull</td>
<td>force</td>
<td></td>
</tr>
</tbody>
</table>

It takes _________________ to make things move.

A throw is a force. You __________________ when you throw. The push makes the ball move __________________ from you. A catch is a force. You __________________ when you catch. The pull makes the ball move __________________ to you. More force makes more motion. The harder you throw, the faster and __________________ the ball goes. When something is _________________, it takes more force to move it. You need more force to throw a basketball than to throw a piece of paper.
Travel Through Time

Read pages 282 to 283 in your textbook. Look how facts are put into time order, or sequencing of events.

*Remember*, the sequence of events tells you about the time order of the story.

Use the chart below to list the sequence of events in the story. Start with the earliest event in the first box.

Sequencing

First

Second

Third

Fourth
1. How have cars changed over time?

2. How have airplanes changed since 1903?
Changing Motion

Use your book to help you fill in the blanks.

What slows things down?

1. Friction is a _______________ that slows down moving things.

2. Friction happens when two things _______________ together.

3. There is more friction on _______________ surfaces than on smooth ones.

4. It is harder to push or pull something on a rough surface than on a _______________ surface.

5. Running shoes have treads that _______________ friction.

6. Other times we try to have _______________ friction to make things easier to move.

How can forces change motion?

7. You know that forces can change the _______________ of things.

8. Forces can make things speed up, slow down, _______________, and start moving.
9. They can make things change too.

Summarize the Main Idea

10. How can you change the way things move?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Changing Motion

Look at each picture. Write fast if the picture shows a friction that makes things go faster. Write slow if the picture shows a friction that makes things go slower.

1. 
2. 
3. 

Fill in the blanks.

4. Rough surfaces make ___________________ friction.
5. Smooth surfaces make ___________________ friction.
Friction slows down moving things by rubbing them together. There is more friction on rough surfaces. To have less friction, we rub smooth things together.

Force can also change the direction of a moving thing. You can change the direction of a soccer ball by kicking it to a new player. First, the ball moves closer to you. Then you kick it, and it moves farther away.
Writing in Science

Write About It

Explain why penguins can slide on the ice.
Make sure to explain why ice is slippery.

Getting Ready

Use the chart below. Write facts and details about penguins and about ice.

<table>
<thead>
<tr>
<th>Penguins</th>
<th>Ice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Drafting

A topic sentence tells the main idea.
Write a topic sentence for your paragraph.

________________________________________________________________________

________________________________________________________________________

Write two facts that back up your main idea.

1. ______________________________________________________________________

________________________________________________________________________

2. ______________________________________________________________________

________________________________________________________________________

Now write your paragraph. Tell why penguins can slide down the ice.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Revising and Proofreading

• Did I begin with a topic sentence?
• Did I include facts and details to explain why penguins can slide on ice?
Objects in Motion

Solve the crossword puzzle. Use the words in the box.

Across
1. a force that moves something closer
2. a force that moves something away
6. how far one thing is from another thing
7. a force that slows down moving things

Down
1. the place where something is
3. how fast something moves
4. a push or a pull
5. when something is moving
Unscramble the vocabulary word in boldface in each sentence. Write the word correctly on the line.

1. You can use words such as up, down, and under to describe nitooisp. __________________________

2. Things that move far in a short time go at a fast edpes. __________________________

3. You hpsu a ball when you throw it. __________________________

4. A force that helps you slow down is tonifcir. __________________________

5. When objects move, they are in notimo. __________________________

6. A lupl is the force you use to open a door. __________________________

7. You can measure nitcedsa with a map or a ruler. __________________________

8. You need cofer to make something move. __________________________
# Forces at Work

Fill in the important ideas as you read the chapter. The sentences in the right column below describe how forces work. Write a word from the box to match each sentence in the chart.

<table>
<thead>
<tr>
<th>FORCE</th>
<th>HOW IT WORKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>magnet</td>
<td>Attracts iron objects at its poles.</td>
</tr>
<tr>
<td>sound</td>
<td>A guitar string is plucked, and the string vibrates.</td>
</tr>
<tr>
<td>gravity</td>
<td>An egg beater has a wheel that spins and beats eggs.</td>
</tr>
<tr>
<td>simple machine</td>
<td>It pulls objects to Earth. A scale is used to measure it.</td>
</tr>
</tbody>
</table>
Magnet

Read the poem on page 304.

Write About It

Response to Literature

1. What can you do with a magnet?

2. What kinds of things does the poet do with her magnet? Use the poem to tell how you know.

3. How have you seen magnets used?
Tools and Machines

Use your book to help you fill in the blanks.

What makes work easier?

1. A ________________ machine can make moving an object easier.

2. A simple machine makes the ________________ of your push or pull stronger.

3. A ________________ lets you use less force to move something.

4. Some examples of levers are ________________, forks, and scissors.

5. A ________________ is also a simple machine.

6. It is easier to push something ________________ a ramp than to lift it up.

7. Another simple machine that helps you move things is a ________________.

8. Wheels let people ________________ objects instead of lifting them.
What is a tool?

9. A ________________ can be a simple machine or it can be made up of different simple machines.

10. A hammer is a tool made of ____________________ simple machine.

11. An engine is made of many ____________________ machines.

Summarize the Main Idea

12. What are some things that make work easier?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
# Tools and Machines

| lever | tool | ramp | simple machine |

Look at the pictures. Read the questions. Write a word from the box to answer each question.

1. What is the man in the picture using to make his work easier?

2. What is the person in the picture using to open a can of paint?

3. The things the people in the pictures are using make moving objects easier. What are these things called?

4. A hammer is a ______________________ made up of one simple machine.

© Macmillan/McGraw-Hill
Machines can make _______________ things easier.
One kind of machine is a _______________ machine.
A _______________ is a simple machine. When you push down on one end of the lever, the other end pushes up.
A _______________ is another simple machine. It has a flat board that goes from a low place to a higher place. Pushing something up a ramp is easier than lifting something.
A _______________ is also a simple machine. It has a rod that goes into a wheel so the wheel can turn.
With a wheel, people can roll objects like bicycles. A bicycle is a _______________ made of many parts that work together to make it move. A _______________ can be a simple machine or it can be made up of different simple machines.
Gravity

Use your book to help you fill in the blanks.

What is gravity?

1. Gravity is a ________________ that pulls things toward each other.

2. All things have a force of ________________.

3. The larger an object is, the ________________ the force of gravity it has.

4. Gravity is what keeps you on the ________________.

5. Earth has a strong force of gravity because of its ________________.

6. The gravity of Earth is stronger than the gravity of ________________.
What is weight?

7. Gravity pulls everything toward the center of Earth with a certain amount of force.

8. This amount of force is called _______.

9. You can find the weight of an object by putting it on a _______.

10. A scale is a tool used to _______ the amount of gravity that pulls on objects.

II. A scale can measure in ounces, pounds, or even tons.

Summarize the Main Idea

12. What is gravity? What does it do?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________
Gravity

Write the letter of the picture that answers each question.

_____ 1. Which picture shows a place where you would weigh less?

_____ 2. Which picture shows a place with strong gravity?

_____ 3. Which picture shows that gravity pulls things to the ground?

_____ 4. Which picture shows a way to learn the weight of an object?
Gravity

Fill in the blanks. Use the words in the box.

| Moon gravity | stronger force | weight Earth |

When you throw a ball in the air, it comes back to _________________. A ________________ called gravity pulls the ball back to the ground. Everything has ________________, but some things have more gravity. Larger objects have ________________ gravity than smaller objects.

Earth is larger than a ball, so it has more gravity. Gravity pulls objects toward the center of Earth with a certain amount of force. The amount of force is known as _________________. On Earth things weigh more than on the _________________. On the Moon your ball would not fall to the ground. It would float away!
Meet Hector Arce

Read pages 320 to 321 in your textbook. Look for causes and effects.

Use the chart to list the effects of gravity. Remember, a cause is why something happens. An effect is the thing that happens. Sometimes a cause has many effects.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tell what you learned about the cause and effects of gravity. Use the words in the box.

You stay on Earth because of ________________________ .
It is the ________________________ that pulls you toward Earth. Gravity also pulls on planets, moons, and ________________________ . It can even form stars. Gravity pulls together clouds of ________________________ and ________________________ to make stars. Gravity makes stars ________________________ . That is why they shine in the sky at night.

Write About It

Cause and Effect. How do stars form?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

© Macmillan/McGraw-Hill
Magnets Push, Magnets Pull

Use your book to help you fill in the blanks.

What does a magnet pull?

1. A magnet can push and ____________________ .

2. A magnet can ____________________, or pull, objects made of iron.

3. Magnets can move things without even ____________________ them.

4. Magnets can pull through ____________________ like paper, plastic, or glass.

5. They can pull through liquids and ____________________ , too.

6. Every magnet has a ____________________ field.

7. This is the ____________________ around a magnet where its force pulls.
What are poles?

8. Magnets have __________________ poles, a north pole and a south pole.

9. The poles are where the pull of the magnet is __________________ .

10. A magnet’s __________________ is stronger on iron objects that are close than on objects that are farther away.

II. A north pole and a __________________ pull toward each other.

Summarize the Main Idea

12. What are some ways magnets push and pull?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Magnets Push, Magnets Pull

Look at the pictures. Write the word from the box that tells what each picture shows.

| attract | poles | repel | magnetic field |

1. ____________________  
2. ____________________

3. ____________________  
4. ____________________

Fill in the blanks. Use words from the box.

5. Magnetic poles ____________________ opposite poles.

6. They ____________________ poles that are the same.
Magnets Push, Magnets Pull

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>pole</th>
<th>attract</th>
<th>field</th>
</tr>
</thead>
<tbody>
<tr>
<td>magnetic</td>
<td>repel</td>
<td>iron</td>
</tr>
</tbody>
</table>

Magnets have a kind of force called ________________ force. They can push or pull some ________________ objects, even without touching them. Magnets can pull or push objects made of iron inside their magnetic _________________. Their force cannot pull or push outside that area.

Every magnet has a north ________________ and a south pole. The poles are the parts with the most magnetic force. Two north poles will ________________, or push each other away. A north pole and a south pole will ________________, or pull each other closer.
Sound

Use your book to help you fill in the blanks.

What is sound?

1. Sound is a kind of __________________________ you hear.

2. Sound is made when something __________________________, or moves back and forth.

3. The vibrating __________________________ goes to your ear.

4. A part of your ear called the __________________________ vibrates, and then you hear the sound.

5. When you speak, air moves from your lungs to your __________________________.

6. The air moves over your __________________________ cords and causes the vocal cords to vibrate.

What makes sounds loud or soft?

7. When a sound is loud, the vibrations are __________________________.

8. When a sound is soft, the vibrations are __________________________.
9. Volume describes the ________________ of a sound.

What is pitch?

10. Sounds can be ________________, low, or in between.

II. Pitch describes how high or ________________ a sound is.

12. When a sound is low, the ________________ are slow.

13. The faster the vibrations, the higher the ________________.

Summarize the Main Idea

14. What do I know about sound?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Sound

Write a word from the box for each definition below.

<table>
<thead>
<tr>
<th>sound</th>
<th>vibrates</th>
<th>pitch</th>
<th>volume</th>
</tr>
</thead>
</table>

1. Moves back and forth ____________________
2. Kind of energy that you hear ____________________
3. The loudness of a sound ____________________
4. How high or low a sound is ____________________
5. Look at the pictures. Write loud or soft to tell about the sound.

_________________________  ___________________________
Sound

Fill in the blanks. Use the words in the box.

<table>
<thead>
<tr>
<th>low</th>
<th>sound</th>
<th>pitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>cords</td>
<td>vibrate</td>
<td>volume</td>
</tr>
<tr>
<td>forth</td>
<td>hear</td>
<td>slow</td>
</tr>
</tbody>
</table>

Sound is energy that you _________________.
When you talk, your vocal cords _________________.
Vibrate means to move back and _________________.
Your vocal ________________ make sound energy when they vibrate. You hear this ________________ with your ears. Vibrations can be big or small, fast or _________________. Small vibrations make sounds, such as a whisper. Whispers have a low _________________. Big vibrations make big sounds, such as a shout. A shout has a high volume.
Fast vibrations make sounds with a high _________________. A cat’s meow has a high pitch.
Slow vibrations make sounds with a ________________ pitch. People can hear many kinds of sounds, but most animals can hear sounds that are too low for people to hear!
# Sound Off!

## Write About It
Describe the pitch and volume of a sound you hear every day. How do we use sounds? Why are sounds important?

## Getting Ready
Think of all the sounds you hear every day. Then fill in the chart below. List at least three different sounds in each column. Put a star next to the sound you want to write about.

<table>
<thead>
<tr>
<th>In the Morning</th>
<th>During the Day</th>
<th>At Night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Writing

Drafting

The main idea is the most important idea. Write a main idea about the pitch and volume of a sound you hear every day.

Now write your story. Tell why the sound is important to you. Use words that help you describe the sound.

Revising and Proofreading

Describing words tell how something looks, sounds, tastes, smells, or feels.

• Did I write a main idea about my sound?
• Did I use describing words?
• Did I correct all spelling, punctuation, and capital letter mistakes?
# Forces at Work

Read each word in the puzzle.
Color the word blue if it tells about magnets.
Color the word green if it tells about machines.
Color the word red if it tells about sound.
Some words will not be colored at all.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Vibrate</th>
<th>Poles</th>
<th>Ounces</th>
<th>Lever</th>
<th>Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatula</td>
<td>Wheel</td>
<td>Pitch</td>
<td>Repel</td>
<td>Yell</td>
<td>Iron</td>
</tr>
<tr>
<td>Whisper</td>
<td>Attract</td>
<td>Ramp</td>
<td>Volume</td>
<td>Weight</td>
<td>Size</td>
</tr>
<tr>
<td>Fork</td>
<td>Scissors</td>
<td>Gravity</td>
<td>Sing</td>
<td>Hammer</td>
<td>Magnetic Field</td>
</tr>
</tbody>
</table>

© Macmillan/McGraw-Hill
Choose the letter of the best answer.

1. What is a ramp?
   a. simple machine  b. measuring machine  
    c. cutting machine  d. weighing machine

2. What is the amount of force of gravity?
   a. ramp  b. sound  
    c. magnet  d. weight

3. What keeps you on the ground?
   a. magnets  b. gravity  
    c. scale  d. jumping

4. What changes when vibrations get bigger?
   a. size  b. weight  
    c. volume  d. gravity