Reading and Writing in Science
Instructions for Copying

Answers are printed in non-reproducible blue. Copy pages on a light setting in order to make multiple copies for classroom use.
## EARTH SCIENCE

Chapter 4 Observing Weather

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Animals

Fill in the important ideas as you read the chapter. Some ideas have already been filled in for you.

- **Insects**
  - 3 body parts
    - ____________________
    - ____________________

- **Birds**
  - ____________________
  - ____________________
  - ____________________

- **Reptiles**
  - scaly skin
    - ____________________
    - ____________________

- **Mammals**
  - lungs
    - ____________________
    - ____________________

- **Fish**
  - ____________________
  - ____________________
  - ____________________

- **Amphibians**
  - ____________________
  - ____________________
Animal Groups

Use your book to help you fill in the blanks.

How do we group animals?

1. All animals need food, water, air, ____________, and space.

2. Scientists ____________ animals into two main groups.

3. Animals with ____________ are in the first group.

4. Alligators and other ____________ are one type of animal in this group.

5. Reptiles have ____________, scaly skin.

6. Fish are also in this group. A fish has ____________ to help it get oxygen from the water.

7. Frogs and other ____________ are also in this group.

8. Most amphibians begin their lives in ____________, not on ____________.

9. Salamanders are ____________.
10. Birds and _____________ have backbones.

11. Mammals have ______________ or hair, and birds have feathers.

**What are some animals without backbones?**

12. Some animals without backbones grow coverings such as _____________ to keep them safe.

13. Insects have ______________ body parts, six legs, and no backbone.

14. The ______________ of an insect help it feel, taste, and smell.

**Critical Thinking**

15. How are a bird and an insect alike? How are they different?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
Animal Groups

Label each animal with its animal group. Use the words in the box.

amphibian  fish  mammal
    bird  insect  reptile

1. ___________________  4. ___________________
2. ___________________  5. ___________________
3. ___________________  6. ___________________
Animal Groups

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

amphibian    bird    fish    mammal
backbone    classify    insect    reptile

Our world is home to many kinds of animals.

When scientists study animals, they _____________ them into two groups. The groups are animals with a _____________ and animals without a backbone.

Birds, _____________, mammals, reptiles, and amphibians all have a backbone. An _____________ is an animal with a hard outer shell but no backbone.

A _____________ is the only animal that has feathers. All birds have two wings, but not all birds can fly. An _____________ has moist skin to help it live on land and in water. A _____________ has dry, scaly skin to protect it and keep it warm. A _____________ has fur and hair to keep it warm. Reptiles and mammals use their lungs to get oxygen.
Animals Grow and Change

Use your book to help you fill in the blanks.

What is a life cycle?

1. A _____________ tells how an animal begins life, lives, and dies.

2. Insects, birds, fish, reptiles, and _____________ start their life cycle as eggs.

3. The life cycle of a _____________ starts when it is born as a _____________ baby.

4. Many animals look like their _____________ when they are young.

What are some other animal life cycles?

5. Some _____________ do not look like their parents at all when they are young.

6. Animals such as butterflies, frogs, and _____________ change during their lives.

7. A caterpillar is the _____________ that hatches from a butterfly egg.
8. A caterpillar enters the ____________ stage when it is time to turn into a butterfly.

9. During this stage, the caterpillar’s ____________ becomes a hard shell.

10. Soon, an adult ____________ comes out of the shell and flies away.

Critical Thinking

11. How does a human change during its life cycle?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Animals Grow and Change

Write the correct word next to each stage of this butterfly’s life cycle.

<table>
<thead>
<tr>
<th>butterfly</th>
<th>larva</th>
</tr>
</thead>
<tbody>
<tr>
<td>egg</td>
<td>pupa</td>
</tr>
</tbody>
</table>

1. This animal begins as an ____________.

2. When it hatches, a ____________ comes out. This is called a caterpillar.

3. The caterpillar’s skin becomes a hard shell. This is called the ____________ stage.

4. Soon, an adult ____________ comes out of the shell.
Animals begin their lives in different ways. A __________ shows how an animal starts life, grows to be an adult, and dies.

Most __________ begin their lives when they are born as live young. As they grow __________, they look more like their parents.

Many insects begin life differently. A __________ begins life as an egg. When the __________ hatches, a __________ comes out. Soon, the larva stops moving and grows a hard __________ around its body. This is called the __________ stage. Finally, a colorful butterfly comes out. It waits for its wings to dry and then flies away.
Staying Alive

Use your book to help you fill in the blanks.

Why do animals act and look the way they do?

1. Animals can _____________, or adapt, to help them stay alive.

2. An _____________ is a body part or a way an animal acts that helps it stay alive.

3. The long neck of a _____________ is an adaptation.

4. The adaptation helps the giraffe _____________ leaves from the tops of trees.

5. Some adaptations, like _____________, help animals hide from other animals.

6. Camouflage can be a color or a body _____________ that helps an animal hide in nature.

7. A ptarmigan is a _____________ that has brown feathers in the summer.

8. In the winter, the ptarmigan’s feathers turn _____________ so it can blend in with the snow.
How do animals stay safe?

9. Some animals move in large ____________ to stay safe.

10. Staying together in a large group helps ____________ smaller fish from being eaten by bigger fish.

11. Other animals ____________ to places where they can find food and stay warm during winter.

12. Some animals, like bears and mice, ____________ during the cold winter.

Critical Thinking

13. What adaptations does a bear have to help it stay safe?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Staying Alive

Describe each animal’s adaptations to stay alive.

1. giraffe

2. stick bug

3. zebra

4. hawk
Staying Alive

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

<table>
<thead>
<tr>
<th>adaptation</th>
<th>camouflage</th>
<th>groups</th>
<th>shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>blend</td>
<td>color</td>
<td>pattern</td>
<td>winter</td>
</tr>
</tbody>
</table>

There are many ways in which animals can stay safe. An ____________ is a body part or a way an animal acts to stay alive. Giraffes have long necks to eat leaves from the tops of trees.

Some animals can ____________ into their environment. The color or ____________ of an animal can help it hide from other animals. This is called ____________ . The ____________ of spots on a leopard helps it hide. Some animals can grow fur and feathers of a different ____________ . A ptarmigan has brown feathers in the summer, but in the ____________ it will turn white. This helps it hide in the snow. Some animals travel in large ____________ . This prevents them from getting eaten.
Helpful Traits

Write About It

Describe an animal. Where does it live? What do you think it eats? What traits help it live in its environment?

Getting Ideas

Write the name of the animal you chose in the center circle. In the outer ovals, write details about the animal.

Planning and Organizing

Clifton wrote three sentences about jackrabbits. Write Yes if the sentence describes them. Write No if it does not describe them.

1. They flatten their ears when they rest.  ———
2. Some have white fur in the winter.  ———
3. Jackrabbits have long tails.  ———
**Drafting**

Write a sentence that tells what animal you are going to describe and where it lives.

__________________________________________________________________________

Now write your description. Describe where the animal lives, what it eats, and which traits help it survive.

**Revising and Proofreading**

Fill in the blanks with descriptive words from the box.

<table>
<thead>
<tr>
<th>flat</th>
<th>hind</th>
<th>short</th>
</tr>
</thead>
<tbody>
<tr>
<td>front</td>
<td>long</td>
<td></td>
</tr>
</tbody>
</table>

A jackrabbit has ____________ ears. Its ________________ legs are short, and its ________________ legs are longer. It also has a fairly ____________ tail.

Jackrabbits live just about everywhere in North America. They live on ____________ land and in valleys. Some of them even live in the mountains.

Now revise and proofread your writing. Ask yourself:

➢ Did I describe this animal and its traits?
➢ Did I tell about traits that help it survive?
➢ Did I correct all mistakes?
Animals

Write the animal group next to each animal. Use the words in the box.

<table>
<thead>
<tr>
<th>animal</th>
<th>group</th>
</tr>
</thead>
<tbody>
<tr>
<td>finch</td>
<td>bird</td>
</tr>
<tr>
<td>lizard</td>
<td>amphibian</td>
</tr>
<tr>
<td>lion</td>
<td>mammal</td>
</tr>
<tr>
<td>frog</td>
<td>fish</td>
</tr>
<tr>
<td>bee</td>
<td>insect</td>
</tr>
<tr>
<td>salmon</td>
<td>reptile</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>adaptation</th>
<th>larva</th>
</tr>
</thead>
<tbody>
<tr>
<td>camouflage</td>
<td>life cycle</td>
</tr>
</tbody>
</table>

1. A **adaptation** shows how a living thing lives, grows, and dies.

2. This beaver’s teeth are an **adaptation** that help it live in its environment.

3. A caterpillar is the **larva** of a butterfly.

4. A toad uses **camouflage** to hide from other animals.
Looking at Habitats

Fill in the important ideas as you read the chapter. Use the words in the box. You will use one of the words two times.

Where do plants and animals live?

What is in a habitat?

What Are Habitats?

Why do habitats change?

- animals
- forest
- lake
- nature
- people
- plants
- pond
- sea
Places to Live

Use your book to help you fill in the blanks.

What is a habitat?

1. Animals need ______________, water, and shelter to live.

2. Plants need ______________, water, and sunlight to live.

3. A(n) ______________ is a place where plants and animals find what they need to live.

4. Some habitats are ______________, and others are warm.

5. Other habitats are ______________ or dry.

6. The ______________, the desert, and the sea are kinds of habitats.
How do living things use their habitats?

7. Living things find ___________ and shelter in their habitats.

8. Some animals eat the ___________ that grow in their habitats.

9. Some animals eat other ___________ that live in their habitats.

Critical Thinking

10. How do you think a snake survives in a very dry, sunny habitat?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
Places to Live

Write how each living thing is using its habitat.

1. fox

2. cactus

3. spider
Places to Live

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

<table>
<thead>
<tr>
<th>habitat</th>
<th>shelter</th>
<th>tunnels</th>
</tr>
</thead>
<tbody>
<tr>
<td>plants</td>
<td>sunlight</td>
<td></td>
</tr>
</tbody>
</table>

Where can plants and animals live? Living things can live in any ___________ where they get what they need to survive. Plants need soil, nutrients, water, and ___________ from their habitats in order to grow. Animals need food, water, and ___________ from their habitats in order to grow.

Plants and animals use their habitats in different ways. Some animals eat the ___________ and animals that live in their habitats. Other animals dig ___________ in the soil to hide from animals that want to eat them. Some plants even eat animals that live in their habitats!
Habitats Change

Use your book to help you fill in the blanks.

How do habitats change?

1. Habitats _______________ in many different ways.

2. Nature can make habitats change _______________ or quickly.

3. A drought is a slow change that takes place when an area gets little or no ______________ for a long time.

4. Animals and _______________ can change habitats.

What happens when habitats change?

5. When habitats change, the _______________ and animals that live there may adapt or make changes.

6. Other plants and animals may not be able to _______________ and can become endangered.

7. An animal becomes _______________ when many of its same kind die.
How can we tell what a habitat used to be like?

8. Scientists study ____________ to learn what Earth was like long ago.

9. Fossils can tell scientists how ____________, plants, and animals have changed over time.

10. Some fossils do not ____________ the habitat where they were found.

11. That tells scientists that there has been a(n) ____________ in the habitat.

12. When an animal becomes ____________, there are no more of its kind left in the world.

Critical Thinking

13. Scientists have found fossils with fins and tails in dry areas. What do you think these places might have looked like long ago? How did they change?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Habitats Change

Use the picture to answer the questions. Use the words in the box in your sentences.

| drought | endangered | extinct | fossil |

1. How do you think this habitat has changed over time?

2. How do you think this habitat became a desert?
Plants and animals live in different places. A(n) _______________ is a place where plants and animals live. People also live in habitats. Habitats can _______________ over time. A(n) _______________ changes a habitat when an area gets little or no rain for a long time. Habitats can change because of _______________ , too. People destroy plant and animal homes by building roads and buildings.

When habitats change, plants and animals may die. A plant or animal becomes _______________ when there are only a few of its kind left in the world. A plant or animal becomes _______________ when there are no more of its kind left. When plants or animals disappear, they may leave a(n) _______________ behind. Scientists study fossils to learn what Earth was like long ago.
Looking at Habitats

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

<table>
<thead>
<tr>
<th>drought</th>
<th>extinct</th>
<th>habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>endangered</td>
<td>fossil</td>
<td>sunlight</td>
</tr>
</tbody>
</table>

1. A place where animals and plants live is called a(n) _______.

2. Plants need soil, rain, and _______ to live.

3. What is left of a living thing from the past is called a(n) _______.

4. An animal becomes _______ when there are only a few of its kind left on Earth.

5. When an animal becomes _______, there are no more of its kind living on Earth.

6. A(n) _______ happens when a place gets little or no rain for a long time.
Circle all the words that tell about the words at the top.

1. what plants need to live
   soil       rain       shelter       food

2. what animals need to live
   soil       rain       shelter       food

3. drought
   little rain       lots of rain       lots of snow       little sunshine

4. what changes habitats
   rocks       floods       fires       buildings
Kinds of Habitats

Fill in the important ideas as you read the chapter.

Woodland Forest

Tropical Forest

Pond

Ocean

Arctic

Desert

Kinds of Habitats
Forests

Use your book to help you fill in the blanks.

What is a woodland forest like?

1. A(n) ________________ habitat has many trees.

2. It is warm in summer and ________________ in winter.

3. A habitat is a place where ________________ and animals get what they need to live.

4. Most ________________ in the forest have leaves that change color in fall.

5. Some trees have leaves that stay ________________ all year.

6. Animals can ________________ in a woodland forest in many ways.

7. Some animals eat leaves, ________________, and nuts.

8. Other animals build homes in trees and ________________ in logs during winter.
What is a tropical rain forest?

9. A(n) ___________ rain forest is a warm, steamy, moist place with many trees.

10. Some animals, such as birds, bats, and insects, live high in the _____________.

11. Other animals such as jaguars, tapirs, and wild boars live on the _____________.

12. Many trees grow very tall, have large ____________, and block sunlight from falling to the ground below.

Critical Thinking

13. Why do you think animals in the tropical rain forest do not sleep all winter?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
Forests

How do woodland forests and tropical rain forests compare? Fill in the Venn diagram.
Forests

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

animals  rain forest  survive  woodland

color  sunlight  winter

A habitat is a place where plants and animals get what they need to live. A(n) _______ forest is one kind of habitat. It has many trees. It is cold during _______ and warm during summer. Many of the trees have leaves that change _______ and drop to the ground in fall. Plants and animals _______ in this kind of forest in many ways. Some animals use the trees as their homes. Others sleep during winter to survive.

A tropical _______ is warm, steamy, and moist. The trees are tall and have very large leaves. They block _______ from getting to the ground. Some _______ live in the treetops. Other animals live on the ground.
Meet Liliana Dávalos

Read the Reading in Science pages in your book. As you read, think about how Liliana compares and contrasts things in her work as a biologist at the American Museum of Natural History. Remember, when you compare things, you decide how they are alike. To contrast is to decide how things are different.

Answer the questions and fill in the chart below.

1. What other habitats have you learned about in this chapter?

2. How is the rain forest alike and different from other kinds of forests?

<table>
<thead>
<tr>
<th>Rain Forest</th>
<th>Regular Forest</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Write About It

1. Compare and Contrast. How would life change for the manakins if the Amazon rain forest were cut down? Would it be the same as it is today? Explain.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. A biologist is a scientist who studies living creatures. What other kinds of scientists have you learned about? How are they alike and different?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Biologists, like Liliana, often compare and contrast animals in their work. Why?

________________________________________________________________________
Hot and Cold Deserts

Use your book to help you fill in the blanks.

What is a hot desert like?

1. A(n) ________ is a very dry and sandy habitat.

2. This kind of habitat can be __________ during the day and cool at night.

3. It does not __________ often in the desert.

4. Plants in this habitat survive by storing __________ in their stems and leaves.

5. Some desert plants have __________ that spread far out from the plant.

6. Desert animals get water from eating __________ or other animals.

7. Most desert animals sleep during the day and hunt for __________ at night.
What is the Arctic like?

8. The ____________ is a very cold and windy desert near the North Pole.

9. Many animals that live in this habitat have thick ____________ that keeps them warm.

10. Other animals have a thick layer of fat, called ____________, to keep warm.

11. Small, low plants grow in the Arctic to stay safe from the cold ____________.

Critical Thinking

12. Do you think that plants in hot and cold desert habitats store water in the same way? Why or why not?

__________________________________________________________________________________________________________________
Hot and Cold Deserts

If the sentence describes a hot desert, write Desert. If the sentence describes the Arctic, write Arctic.

1. It can be hot during the day, and cool at night.

2. It is very windy and cold.

3. The plants store water in their stems.

4. There are no trees.

5. Animals have thick blubber or fur.

6. Animals have light fur, feathers, or scales.

7. Animals sleep during the day and hunt at night.

8. It is near the North Pole.
Hot and Cold Deserts

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

<table>
<thead>
<tr>
<th>Arctic</th>
<th>cacti</th>
<th>hunt</th>
</tr>
</thead>
<tbody>
<tr>
<td>blubber</td>
<td>desert</td>
<td>North Pole</td>
</tr>
</tbody>
</table>

Some places on Earth get very little rain. These places are called deserts. A hot ___________ can be very warm during the day and cool at night.

Some hot-desert plants, like ___________, store water in their thick stems. Many hot-desert animals sleep during the day and ___________ at night.

The ___________ is a cold and windy desert near the ___________. There are no trees, and plants grow low to the ground to stay safe from wind. Many cold-desert animals, like seals, have thick fur or ___________ to stay warm. Desert animals and plants have adaptations that help them survive in their habitats.
Oceans and Ponds

Use your book to help you fill in the blanks.

What is the ocean like?

1. The largest bodies of water on Earth are called ____________.

2. An ocean is a large body of ____________ water.

3. Most of ____________ is covered by oceans.

4. Kelp is a kind of ____________, or ocean plant.

5. It grows in the ocean and provides ____________ for many ocean animals.

6. Animals in the ocean have ____________ parts that help them swim through the water.

7. Some animals in the ocean have ____________, spines, or stingers to help them stay safe.
What is a pond like?

8. A(n) ________ is much smaller than an ocean.

9. Ponds have ________ water and do not flow.

10. Frogs, fish, and ________ are some animals that live in or near ponds.

11. Many plants grow in ________ pond water near the shore.

12. Animals that live in ponds ___________ in different ways.

Critical Thinking

13. Do you think that the same types of animals live in both oceans and ponds?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________
Oceans and Ponds

Look at the animal and plant pictures beneath the box. Write the name of each animal or plant under the habitat where they live.

<table>
<thead>
<tr>
<th>Animal/Plant</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>salamander</td>
<td>pond</td>
</tr>
<tr>
<td>mosquito</td>
<td>ocean</td>
</tr>
<tr>
<td>dolphin</td>
<td>ocean</td>
</tr>
<tr>
<td>cat tails</td>
<td>pond</td>
</tr>
<tr>
<td>penguin</td>
<td>ocean</td>
</tr>
<tr>
<td>coral reef</td>
<td>ocean</td>
</tr>
</tbody>
</table>

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Oceans and Ponds

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

<table>
<thead>
<tr>
<th>coral</th>
<th>fresh</th>
<th>kelp</th>
<th>pond</th>
</tr>
</thead>
<tbody>
<tr>
<td>deep</td>
<td>habitat</td>
<td>ocean</td>
<td>shallow</td>
</tr>
</tbody>
</table>

Most of Earth is covered by water. A(n) ____________ is a large body of water that flows. Plants such as ____________ grow in the water and provide food for animals. A special animal called ____________ lives on the ocean floor and provides shelter for many other animals. Some animals, such as mussels and crabs, live near the shore. Other animals, such as sea cucumbers and sea spiders, live in ____________ waters.

A(n) ____________ is a body of water that does not flow. Most ponds have ____________ water in them. Different kinds of plants and animals live in this ____________ . Some plants grow in ____________ water near the shore. Their stems and leaves rise to the top of the water.
A Visit to the Ocean

Write a story about a trip you might take to the ocean. How would you get there? Who would you go with? Describe in your story what you would see, hear, and do. Write how it might feel to be there.

Getting Ideas

Picture yourself standing on a beach next to the ocean. Write what you see and hear.

Planning and Organizing

Jackson wrote three sentences. They describe what he saw, heard, and did at the ocean. Circle the descriptive words he used.

1. The gigantic ocean waves roared loudly.
2. I saw white gulls sitting on a big rock near the shore.
3. I found a piece of green sea glass and two pretty pink shells.
Drafting
Write a sentence to begin your story. Use I to tell about yourself. Tell where you went and when.

Now write a story on a separate piece of paper. Put the events in time order. Describe what you saw, heard, and did at the ocean.

Revising and Proofreading
Olivia wrote some sentences and made five mistakes. Find the mistakes and correct them.

Yesterday, I went to the beech with my family. We saw a huge fish jump threw the waves. I looked for shells. I found a beautiful blue peice of sea glass. Then I fell asleep on my beach towel. When I wake up, it was almost time to go home.

Now revise and proofread your writing. Ask yourself:

- Did I tell how I got to the ocean and with whom I went?
- Did I describe what I saw, heard, and did?
- Did I correct all mistakes?
Kinds of Habitats

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

<table>
<thead>
<tr>
<th>Arctic</th>
<th>habitat</th>
<th>pond</th>
</tr>
</thead>
<tbody>
<tr>
<td>desert</td>
<td>ocean</td>
<td>tropical</td>
</tr>
</tbody>
</table>

1. A(n) ____________ is a place that gets very little rain.

2. A place where plants and animals live is called a(n) ____________.

3. A(n) ____________ is a large body of water that flows.

4. A(n) ____________ rain forest is a place with many trees that is warm, steamy, and moist.

5. The cold desert near the North Pole is called the ____________.

6. A small body of fresh water that does not flow is called a(n) ____________.
Identify each habitat.

1. 

2. 

3. 

4. 

5. 

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In Payment
By Aileen Fisher

Read the Unit Literature pages in your book.

_write about it_

Response to Literature

1. How does the butterfly “sort of pay for nibbles” in this poem?

2. How will carrying pollen to the blossom help the butterfly?

3. What happens first, next, and last in this poem?
Observing Weather

Fill in the important ideas as you read the chapter.

Weather Words

Weather Tools

How Can We Describe Weather?

Weather Changes
Weather

Use your book to help you fill in the blanks.

What is weather?

1. People think about the ____________ every day.

2. The ____________ outside helps people choose what kind of clothes to wear.

3. Temperature is a measure of how ____________ or cold something is.

4. People use a(n) ____________ to measure temperature.

5. There are ____________ ways to describe temperature: in degrees Fahrenheit or degrees Celsius.

6. The ____________ that falls from the clouds can also be measured.

7. Rain, snow, sleet, and ____________ are kinds of precipitation.
What is wind?

8. The differences between hot and cold air cause air to move, making _____________.

9. You can use a(n) _____________ to measure the direction of wind.

10. This tool also shows how _____________ the wind is blowing.

11. People can use a(n) ______________ to measure the speed of the wind.

Critical Thinking

12. What is wind? What can wind tell you about weather?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Weather

Draw a line to match the weather tool with what it measures.

1. a. temperature

2. b. wind speed

3. c. precipitation
Weather

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

| anemometer | rain gauge | weather |
| Fahrenheit | temperature | wind |
| precipitation | thermometer | wind sock |

Look out the window. What is the __________ like? Is it sunny? Is it rainy? People use special tools to find out about the weather. A(n) __________ is used to find out how hot or cold it is outside.

This tool measures the __________ of the air. The air is measured in degrees __________ or in degrees Celsius.

Moving air is called __________. The speed with which the wind blows is measured by using a(n) __________. A(n) __________ shows what direction the wind is blowing. Rain, snow, sleet, and hail are kinds of __________. A(n) __________ is used to measure precipitation. These tools help people learn about the weather.
Why Seasons Happen

Use your book to help you fill in the blanks.

What are the seasons like?

1. In the fall, the ___________ is cool.

2. Some leaves ___________ colors and fall off their trees.

3. The air is much colder during ___________.

4. In some places, the cold rain turns to ___________.

5. Some birds ___________ to warmer places during winter.

6. People wear warmer ___________ in winter.

7. In the spring, ___________ days help new plants grow.

8. Summer is the warmest ___________ of all!
What causes the seasons?

9. Earth takes about 365 days to ____________ the Sun.

10. Earth’s orbit is its ____________ around the Sun.

11. When Earth is ____________ to the Sun, the weather is warmer.

12. When Earth is ____________ from the Sun, we have fall and winter.

Critical Thinking

13. Why does the weather change during the year?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Why Seasons Happen

Circle the word that best tells about each picture.

1. axis  orbit
2. fall  winter
3. spring  winter
4. fall  summer

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Why Seasons Happen

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

You have learned that Earth moves around the Sun. Earth also rotates on its ____________.

Do you ever wonder why ____________ change?

As Earth rotates, it is also moving in a path around the Sun. This path is called Earth’s ____________.

It takes about 365 days for Earth to travel around the Sun once. The seasons change when Earth’s ____________ brings it closer or farther away from the Sun. When Earth is closer to the Sun, we have warmer ____________ and summer weather. When Earth is far from the Sun, we have cooler ____________ and winter weather. What season would it be on the other side of the world right now?
Fun with the Seasons

Write About It

Think about the seasons and the different activities you do throughout the year.

On a separate piece of paper, write a story about the activities you do in winter and in summer. Include details about how the seasons are different.

Getting Ideas

Fill in the chart with ideas about summer and winter.

<table>
<thead>
<tr>
<th>Winter</th>
<th>Summer</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Planning and Organizing

Lisa wrote two sentences about winter and summer. Write Alike if the sentence shows how they are alike. Write Different if it shows how they are different.

1. __________ Winter and summer are seasons.
2. __________ Winter can be very cold, and summer can be very hot.
Drafting
Write a sentence to begin your paragraph. Tell how you feel about winter and summer.

Now write your story on a separate piece of paper. Tell what you do in winter and summer. Tell how the seasons are different.

Revising and Proofreading
Lisa wrote some sentences. She made six mistakes. Find the errors. Then correct them.

I really like winter? I like to go ice skating on the pond. I also like to go sleding. My favorite season is summer. It gets hot so I go to the beech every day with my friends. We look for shells. At night, we look at the stars and we try to find the Big Dipper. There are many activities to do in both seasons.

Now revise and proofread your writing. Ask yourself:

► Did I tell about what I like to do in winter?
► Did I tell about what I like to do in summer?
► Did I correct all mistakes?
Changes in Weather

Use your book to help you fill in the blanks.

What are different kinds of clouds?

1. Clouds can tell about changes in the ________.

2. Small, puffy clouds that can appear in long rows are called ________ clouds.

3. During the ________, it is easy to see these clouds.

4. Thin clouds that are very high in the sky are called ________ clouds.

5. Cirrus clouds are made of ________.

6. Thick or thin clouds that are very low in the sky are called ________ clouds.
How can we stay safe from weather?

7. Weather changes when different kinds of ______ come together.

8. Storm clouds can gather, and ______ can form inside of them.

9. Very strong storms can cause ______.

10. Thunderstorms with spinning columns of air are called ______.

Critical Thinking

11. How would you stay safe during a strong thunderstorm?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
Changes in Weather

Use the words in the box to tell what is shown in the pictures.

<table>
<thead>
<tr>
<th>cirrus</th>
<th>hurricane</th>
<th>tornado</th>
</tr>
</thead>
<tbody>
<tr>
<td>cumulus</td>
<td>stratus</td>
<td></td>
</tr>
</tbody>
</table>

1. 

2. 

3. 

4. 

5. 

Changes in Weather

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

<table>
<thead>
<tr>
<th>cirrus</th>
<th>disasters</th>
<th>rows</th>
<th>tornado</th>
</tr>
</thead>
<tbody>
<tr>
<td>cumulus</td>
<td>hurricane</td>
<td>stratus</td>
<td>weather</td>
</tr>
</tbody>
</table>

There are many different kinds of clouds. Clouds tell about changes in the ________________.

Small, white, puffy clouds are called ________________ clouds. They appear in long ________________ and mean fair weather. Thin clouds that are very high in the sky are called ________________ clouds. These clouds are made of ice. Thick or thin clouds that cover the entire sky are called ________________ clouds. These clouds mean that rain or snow is coming.

Weather can change when different types of air come together. Very strong storms can cause ________________ such as floods. A ________________ is a storm with very strong winds. A ________________ is a column of spinning air. People can stay safe from many storms by staying indoors.
Predicting Storms

Read the Reading in Science pages in your book. As you read, pay attention to the most important ideas. List them in the chart below. Then summarize the article. Remember, when you summarize, you retell the most important ideas in the selection.

Idea #1

________________________________________

________________________________________

________________________________________

________________________________________

Idea #2

________________________________________

________________________________________

________________________________________

________________________________________

Summary

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________
How does Doppler radar work?

______________________________

______________________________

______________________________

Write a paragraph that retells what you learned about why scientists try to predict the weather.

______________________________

______________________________

______________________________
1. To find out how hot or cold something is, we can measure its ________.

2. Rain, snow, sleet, and hail are all different kinds of ________.

3. A wind sock or a(n) ________ is used to measure the force of wind.

4. In fall the ________ on some trees turn colors and fall off.

5. Earth’s ________ is the path it takes around the Sun.

6. The small, white, puffy clouds we see in spring and summer are called ________ clouds.
Solve each riddle.

1. I am thin and high in the sky. I am made of ice. What kind of cloud am I?

2. I am small, white, and puffy. I appear when the weather is fair. What kind of cloud am I?

3. I am low in the sky. I appear when rain or snow is on the way. What kind of cloud am I?

4. I am a tool that can measure the speed of the wind. What am I?

5. I am a spinning column of air. I can cause a lot of damage. What am I?
Sunflakes
by Frank Asch

Read the Unit Literature pages in your book.

Write About It

Response to Literature

1. What season is the poet writing about? Use the poem to tell how you know.

2. What are some things that you do in July? How do your activities compare to the poet’s?

Looking at Matter

Fill in the important ideas as you read the chapter. Write three facts about the properties of each kind of matter.

Matter is ____________________________________________.

<table>
<thead>
<tr>
<th>What Are the Properties of Matter?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
</tbody>
</table>
Describing Matter

Use your book to help you fill in the blanks.

What is matter?

1. Matter is anything that takes up ___________ and has mass.

2. Some matter can be ___________ by people.

3. An object’s mass is the amount of ___________ it has.

4. Objects can be made of ___________ amounts of matter.

5. A ___________ is used to measure and compare mass.

How can you describe matter?

6. Matter can be described by talking about its ___________.

7. A ___________ is how matter looks, feels, smells, tastes, or sounds.
8. Different __________ of matter have different properties.

9. Matter can be ______________ or nonliving.

10. There are ____________ main kinds of matter: solids, liquids, and gases.

Critical Thinking

11. What are some ways that matter can be described? What do these ways tell you about matter?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Describing Matter

What is the secret answer? Fill in the missing words and then fill in the answer by using the circled letters.

1. Matter can be __ __ __ or thin.

2. Anything that takes up space and has mass is called __ __ __.

3. Matter can be a __ __ __, liquid, or gas.

4. Matter can be natural or made by __ __ __.

5. The amount of matter in an object is called __ __.

6. A __ __ __ __ __ describes how matter looks, feels, smells, tastes, or sounds.

Q: What did the doctor say to the scientist?

A: W __ a __ s t h __ m __ t e r?
Describing Matter

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

<table>
<thead>
<tr>
<th>balance</th>
<th>feel</th>
<th>gas</th>
<th>matter</th>
<th>smaller</th>
</tr>
</thead>
<tbody>
<tr>
<td>describe</td>
<td>flexible</td>
<td>mass</td>
<td>property</td>
<td></td>
</tr>
</tbody>
</table>

Matter is everywhere. Matter can be a solid, a liquid, or a _____________. Anything that takes up space and has ____________ is matter. The amount of ____________ in an object is called mass. A ____________ can be used to measure and compare the mass of objects. Sometimes, a ____________ object has more mass than a larger object.

It is possible to ____________ matter by talking about its properties. A ____________ is a way matter looks, feels, smells, tastes, or sounds. Matter can be soft or it can be hard. Matter can be ____________ or stiff. It can also ____________ rough, smooth, or wet. Some matter is even invisible!
Solids

Use your book to help you fill in the blanks.

What is a solid?

1. A ____________ is one of three kinds of matter.

2. Solids have a ____________ of their own.

3. Like all matter, different solids have ____________ properties.

4. Solids can be made from ____________ such as wood, plastic, and metal.

5. They can feel smooth, rough, soft, or hard when you ____________ them.

How can we measure solids?

6. Many ____________ can be used to measure solids.

7. A ____________ can be used to measure the width, length, or height of an object.
8. Rulers can be used to measure the lengths of objects in __________ or inches.

9. A __________ is used to tell how much mass something has.

10. To tell the difference between two objects, their measurements can be ___________.

Critical Thinking

11. What will happen to a balance if you put a brick on one side and a feather on the other? Why?

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________
Solids

Circle the best answer.

1. Which solid is longer?

2. Which solid has less mass?

3. Which is softer?

4. Which is smoother?
Solids

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

<table>
<thead>
<tr>
<th>balance</th>
<th>inches</th>
<th>materials</th>
<th>properties</th>
<th>sink</th>
</tr>
</thead>
<tbody>
<tr>
<td>centimeters</td>
<td>mass</td>
<td>measure</td>
<td>rough</td>
<td></td>
</tr>
</tbody>
</table>

A solid is a kind of matter that has its own shape. Like all matter, different solids can be made of different _______________. Solids get their _______________ from the materials they are made from. Solids can feel _______________ , smooth, hard, or soft. Some solids float in water. Others _______________ in water.

You can use tools to _______________ solids. A ruler measures the length, width, and height of a solid. A ruler is used to measure lengths in units called _______________ or in units called _______________.

The amount of matter in a solid is called _______________. A _______________ tells how much mass a solid has. Both methods of measurement can be used to form a more complete picture of objects.
Natural or Made by People?

Read the Reading in Science pages in your book. As you read, pay attention to important ideas. Summarize them in the chart below. Remember, when you summarize, you retell the most important ideas in the selection.

<table>
<thead>
<tr>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are natural solids and manmade solids the same and different?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Idea #1</td>
</tr>
<tr>
<td>Idea #2</td>
</tr>
<tr>
<td>Idea #3</td>
</tr>
</tbody>
</table>
Write About It

Summarize. How is a plastic chair made? Use the chart you made to write your answer.

I. What are some plastic things in your classroom?
Liquids and Gases

Use your book to help you fill in the blanks.

What is a liquid?

1. The opposite of _____________ matter is solid matter.

2. A liquid takes the shape of the _______________ it is in.

3. You can measure the _______________ of a liquid by using a measuring cup.

4. Volume is a measure of the amount of _______________ something takes up.

What is a gas?

5. A gas has no _______________ of its own.

6. A(n) _______________ spreads to fill the space it is in.

7. A bubble is a(n) _______________ with gas inside it.
8. You can ___________ the volume or the mass of a gas.

9. The ___________ around us is made of many gases.

10. You can feel these gases moving on a(n) ___________ day.

11. We breathe a gas called ___________.

Critical Thinking

12. What solids, liquids, and gases do you use every day?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
# Liquids and Gases

Classify the words in the box based on their state of matter.

<table>
<thead>
<tr>
<th>Solids</th>
<th>Liquids</th>
<th>Gases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>air</th>
<th>glass</th>
<th>ice</th>
<th>milk</th>
<th>pencil</th>
</tr>
</thead>
<tbody>
<tr>
<td>apple</td>
<td>helium</td>
<td>juice</td>
<td>oxygen</td>
<td>water</td>
</tr>
</tbody>
</table>

Use with Lesson 3
Liquid and Gases
Liquids and Gases

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

<table>
<thead>
<tr>
<th>air</th>
<th>containers</th>
<th>liquid</th>
<th>plants</th>
<th>three</th>
</tr>
</thead>
<tbody>
<tr>
<td>breathe</td>
<td>gas</td>
<td>oxygen</td>
<td>solid</td>
<td></td>
</tr>
</tbody>
</table>

We use matter every day. Our clothes, shoes, breakfast, and even the ____________ we breathe are kinds of matter. There are ____________ kinds of matter. A ____________ is a kind of matter that has its own shape. A ____________ is a kind of matter that does not have a shape of its own. A ____________ is another kind of matter that does not have its own shape.

Gases and liquids take the shapes of the ____________ they are in.

The air we ____________ is made of many gases. One of these gases in the air is called ____________ . Animals and ____________ need oxygen to live. We cannot see gases, but they are all around us.
Fun with Water

Write About It
This girl is having fun in the water! Think of times that you have had fun in water. Draw and write about what you did.

Getting Ideas
Look at the starfish. Write Water in the center. In the arms, write things you do to have fun in the water.

Planning and Organizing
Put these sentences in time order.

_______ I jumped into the water.
_______ I put on my bathing suit and packed some toys.
_______ My mother and I walked to the beach.
Drafting

Write a sentence to begin your story. Use I to write about yourself.


Now write your story on a separate piece of paper. Tell about fun that you have had in the water. Tell how the water made you feel.

Revising and Proofreading

Julia wrote some sentences. She made five mistakes. Find the mistakes. Then correct them.

Lucy and I walked to the ocean for a swim. His dad went with us. We jumped in the weaves. The water felt cool. We threw a beach ball back and forth. We floated on an alligator raft. We got tired after about an hour and sat on our towels.

Now revise and proofread your writing. Ask yourself:

► Did I write about what I did in the water?
► Did I tell how I felt?
► Did I correct all mistakes?
Looking at Matter

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

1. Anything that takes up space and has mass is ______________.

2. The amount of matter in an object is called ______________.

3. A ______________ can be used to measure and compare mass.

4. The amount of space something takes up is called ______________.

5. A ______________ has a shape of its own.

6. A ______________ is how matter looks, feels, smells, sounds, or tastes.
Write whether each fact describes a solid, a liquid, or a gas.

1. This kind of matter has a shape of its own.
   ____________

2. This cannot be seen, but it is everywhere.
   ____________

3. Water is an example of this kind of matter.
   ____________

4. Oxygen is an example of this kind of matter.
   ____________

5. This can be made of plastic, metal, or wood.
   ____________

6. This kind of matter can be measured by using a measuring cup.
   ____________
Changes in Matter

Using what you have learned from the chapter, fill in the blanks to tell how matter can change.

**Physical Change**

**Chemical Change**

**Mixture**

**Change of State**
Matter Changes

Use your book to help you fill in the blanks.

What are physical changes?

1. Physical changes cause a(n) ________ in matter.

2. A physical change takes place when the size or shape of ________ changes.

3. The ________ of matter stays the same if its shape is changed.

4. When a piece of paper is folded or cut, a(n) ________ change is taking place.

5. A change in ________ can be a physical change, too.

6. When something gets ________ or dries, it may look and feel different, but it is only a physical change.
What are chemical changes?

7. During a(n) ___________ change, one kind of matter becomes a different kind of matter.

8. When ___________ goes through a chemical change, it may not be possible to change it back.

9. When wood is ___________ in a fireplace, a chemical change is taking place.

10. Observing ___________ and feeling ___________ and cold are clues that a chemical change may be happening.

Critical Thinking

11. Think about a piece of bread. How can you make a physical change to the bread? How can you make a chemical change?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Matter Changes

Identify each description as a physical change or a chemical change.

1. An iron screw锈s in the rain.

2. A piece of paper is folded.

3. A rock breaks down into soil.

4. Water freezes and turns into ice.

5. A peach turns brown.

6. A ball gets wet.

7. A slice of cheese melts.

8. An egg is fried.
Matter Changes

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

<table>
<thead>
<tr>
<th>burns</th>
<th>mass</th>
<th>rusts</th>
</tr>
</thead>
<tbody>
<tr>
<td>chemical change</td>
<td>matter</td>
<td>temperature</td>
</tr>
<tr>
<td>fold</td>
<td>physical change</td>
<td></td>
</tr>
</tbody>
</table>

Matter changes every day. A ___________ takes place when the size or shape of matter changes but the type of matter does not. When you ___________ paper, you are making a physical change. When only the shape of an object changes, its ___________ stays the same. When the ___________ of water changes, it can freeze or boil. These are physical changes, too.

You can also make a ___________ to matter. A chemical change happens when ___________ changes into a different kind of matter. When matter ___________ , it can not change back to its original form. When iron ___________ , it changes color and feels different. These are chemical changes at work.
Changes of State

Use your book to help you fill in the blanks.

How can heating change matter?

1. Heat can change ____________ in different ways.

2. When a solid gets enough ____________, it melts.

3. When something melts, it changes from a(n) ____________ to a liquid.

4. Different solids can ____________ at different temperatures.

5. When water is heated and changes to a gas, it ____________.

6. This gas is called ____________.

7. Some liquids ____________ when they get enough heat.

8. When heat is added to ice, it turns into ____________ water.
How can cooling change matter?

9. When you ____________ matter, you take heat away from it.

10. A gas can ____________ when it is cooled.

11. When a(n) ____________ condenses, it changes into a liquid.

12. When ____________ lose enough heat, they freeze.

13. When matter ____________, it changes from a liquid to a solid.

Critical Thinking

14. Explain how you can make an ice cube change from a solid to gas.
Changes of State

Solve the riddles and fill in the puzzle.

Down
1. I keep my shape when I am cool.  
   If it gets too warm, I melt.  
2. You can add me or take me away to change matter. 
4. This happens when I get very cold. 
6. When I am heated, I go into the air.

Across
3. This is what I do when I change from a gas to a liquid. 
5. This is how I turn solids into liquids. 
7. This is how I go into the air when I am boiling.
Changes of State

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

condense  heat  solid
evaporate  liquid  temperatures
freeze  melt  water vapor

There are three main states, or forms, of matter.
The three main states are _______________ , liquid, and gas. Some solids _______________ when they get enough heat. When something melts, it changes from a solid to a(n) _______________ . That is what happens when an ice cube melts. Different solids must be heated to different _______________ in order to melt. When water boils, it will _______________ , or turn into a gas. This gas is called _______________ .

When _______________ is taken away from matter, it can change. When gases are cooled, they _______________ . When you _______________ water, it turns into a solid. Different liquids freeze at different temperatures.
Colorful Creations

Read the Reading in Science pages in your book. Write inferences based on the statements in the “What I Know” column. Write your inferences on the chart.

<table>
<thead>
<tr>
<th>What I Know</th>
<th>What I Infer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most crayons are made of wax. Colored wax is melted into a liquid.</td>
<td></td>
</tr>
<tr>
<td>The crayon mold is cooled with cold water.</td>
<td></td>
</tr>
<tr>
<td>A machine packs the crayons into boxes.</td>
<td></td>
</tr>
</tbody>
</table>
Write About It

Predict. What do you think would happen if the mixture of wax was poured into a mold shaped like a square? Explain your answer.

What two states of matter are used to make crayons?

How do you think different-colored crayons are made?
Mixtures

Use your book to help you fill in the blanks.

What are mixtures?

1. When two or more things are put together, the result is called a(n) ________.

2. Mixtures can have different ________ of solids, liquids, and gases.

3. Some mixtures can be picked ________.

Which mixtures stay mixed?

4. A mixture that is difficult to take apart is called a(n) ________.

5. When salt is added to water, the salt ________ and mixes with the water.

How can you take mixtures apart?

7. Some mixtures are __________ to take apart. Other mixtures are more difficult.

8. A(n) __________ can be used to separate sand from water.

9. A(n) __________ can be used to separate iron from sand.

10. To take out salt from salt water, a process called __________ is used.

Critical Thinking

11. Suppose you had a mixture of water and pebbles. How could you take apart the mixture?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Mixtures

Write whether you would need to use a magnet, a filter, evaporation, or your hands in order to take apart each mixture listed below. Some mixtures can be taken apart in more than one way.

1. salt water
2. water and sand
3. iron nails and sand
4. raisins and cornflakes
5. iron screws and plastic beads
6. pennies and nickels
7. blue paper and white paper
8. water and seashells
Mixtures

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

Have you ever made a collage? When you glue pieces of paper together, you make a(n) _______.

A mixture can be any combination of solids, ________, and gases. Some mixtures can be ________ into the parts that were combined.

When salt and water are mixed together, a(n) _______ is made. The salt cannot be seen because it ________ in the water. The mixture can be taken apart by using _________. The water will evaporate and the salt will be left behind.

To separate water and sand, a(n) _______ can be used. To separate iron and sand, a(n) _______ can be used. You can separate some mixtures by using your hands.
Writing a Recipe

Write About It
You can write a recipe. Explain how you would use some of this fruit to make a fruit salad. Explain why it is a mixture.

Getting Ideas
Look at the illustration. What kinds of fruit do you see? Think about how you would make a fruit salad.

What kinds of fruit would you want to put in a fruit salad? List them below.

Planning and Organizing
Put the steps in the correct order.

___________ Mix the fruit together.

___________ Wash the fruit and put it on the cutting board.

___________ Get a bowl and a cutting board.

___________ Have an adult cut up each fruit. Put the fruit in the bowl.
Drafting

Write a sentence to begin your recipe. Tell what the recipe is for.


Now write the recipe on a separate piece of paper. Put the steps in order. At the end, tell why it is a mixture.

Revising and Proofreading

Use the words in the box to fill in the blanks.

<table>
<thead>
<tr>
<th>Finally</th>
<th>First</th>
<th>Next</th>
<th>Second</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

__________, I put a big bowl on the counter.

__________, I got a spoon. ____________,

I put cut-up apples and bananas in the bowl. ____________,

I added grapes, blueberries, and strawberries.

__________, I mixed everything together.

Now revise and proofread your writing. Ask yourself:

➤ Did I write the steps in order?
➤ Did I explain why it is a mixture?
➤ Did I correct all mistakes?
Changes in Matter

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

chemical change  evaporation  melts
condenses  freezes  solution

1. When matter _______________, it changes from a solid to a liquid.

2. A process called _______________ can be used to separate salt from water.

3. A(n) _______________ is a mixture that is difficult to separate.

4. When matter _______________, it changes from a gas to a liquid.

5. When water _______________, it changes from a liquid to a solid.

6. When a slice of bread is toasted, a(n) _______________ happens.
Draw a line from each picture to the sentence that describes it.

1. [Picture]  
   a. Salt dissolves in water to make a solution.

2. [Picture]  
   b. When a physical change takes place, matter changes shape.

3. [Picture]  
   c. Evaporation happens when matter changes from a liquid to a gas.

4. [Picture]  
   d. After a chemical change takes place, matter may look and smell different than before.

5. [Picture]  
   e. When matter melts, it changes from a solid to a liquid.
### Pushes, Pulls, and Magnets

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>What It Does</th>
</tr>
</thead>
<tbody>
<tr>
<td>friction</td>
<td>It moves objects away from you.</td>
</tr>
<tr>
<td>gravity</td>
<td>It moves objects toward you.</td>
</tr>
<tr>
<td>magnet</td>
<td>It pulls objects to Earth.</td>
</tr>
<tr>
<td>pull</td>
<td>It slows down moving objects.</td>
</tr>
<tr>
<td>push</td>
<td>It attracts iron objects at its poles.</td>
</tr>
</tbody>
</table>
Pushes and Pulls

Use your book to help you fill in the blanks.

What makes things move?

1. It takes a(n) ___________ or a pull to make something move.

2. A push or a pull is a(n) ___________.

3. To push something, you move it ___________ you.

4. To pull something, you move it ___________ you.

What are some forces?

5. When you throw a ball in the air, ___________ pulls it back to Earth.

6. Gravity is a force that ___________ things to Earth.

7. One ___________ of gravity is weight.

8. How much force it takes to pull something to Earth is called ___________.

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Chapter 7 • Pushes, Pulls, and Magnets
Reading and Writing

108 Use with Lesson 1
Pushes and Pulls
9. Sometimes objects __________ together when they move.

10. When this happens, a force called __________ slows down the objects.

How can forces change motion?

11. Forces can change how things _____________.

12. Forces can make things ____________ up, slow down, or change direction.

Critical Thinking

13. Do you think gravity is important? Why or why not?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
Pushes and Pulls

Answer each riddle. Then find each word in the word search.

1. I am a force that slows down moving things.
   What am I? _____________

2. I am a force that pulls things to Earth.
   What am I? _____________

3. To put an object in motion, you must use me.
   What am I? _____________

4. I am the amount of force that pulls an object toward Earth. What am I? _____________

5. I am what you do to move an object closer to you. What am I? _____________

Friction

olmsnhiehge
rgravityci
 catapult
emnxylme
pullnzcbot
Pushes and Pulls

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

amount  down  pull
away  force  push
direction  gravity

How do you move things? Think about the last time you threw a ball. You used a(n) ________________ to move the ball. A force is a(n) ________________ or pull that makes objects move. When you ________________ an object, you move it closer to you. When you push an object, it moves ________________ from you.

You can use forces to speed up or slow ________________ an object. Friction is a force that slows some things down. Forces can even change the ________________ of an object’s motion. The force that pulls objects to Earth is called ________________ . The ________________ of force that gravity pulls down on an object is called weight. People use forces every day.
Exploring Magnets

Use your book to help you fill in the blanks.

What do magnets do?

1. Magnets use _______________ to attract some objects.
2. Magnets can pull objects without _______________ them.
3. A(n) _______________ can attract objects made of iron, nickel, or steel.
4. Strong magnets can _______________ objects that are far away.
5. Magnets can pull objects that contain _______________ or steel.
6. Magnets cannot pull objects made of _______________ or plastic.
What are poles?

7. The __________ are the two ends of a magnet.

8. All magnets have a north pole and an __________ pole.

9. The __________ pole and the south pole are opposites.

10. The north pole of one magnet and the south pole of another magnet will __________ each other.

11. Two like magnetic poles will __________ each other.

Critical Thinking

12. How do people use magnets?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Exploring Magnets

If a magnet will attract the object, write Will attract. If a magnet will not attract the object, write Will not attract.

1. paper clip  
2. screw  
3. penny  
4. pencil  
5. aluminum foil  
6. nail

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Exploring Magnets

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

It is possible to move objects without even touching them. A(n) ____________ can make some things move. It uses force to ____________ , or pull, some objects. It can pull objects that contain ____________ , like paper clips and screws. It can also pull objects made of ____________ or steel. A magnet can not attract things made of wood or plastic.

Every magnet has two poles. If the ____________ pole of one magnet is put next to the south pole of another magnet, the two magnets will attract. If the ____________ pole of one magnet is put next to the south pole of another, the two magnets will repel. Magnets are powerful!
Everyday Magnets

Use your book to help you fill in the blanks.

How do we use magnets every day?

1. We use magnets to _____________ one thing to another thing.

2. Two objects that are attracted to each other move _____________ each other.

3. Magnets can help close cabinet or refrigerator _____________ in the kitchen.

4. The magnet on a can opener _____________ the lid from the can.

5. Large magnets can lift heavy metal objects from _____________ piles.

6. Magnets can help toys _____________.
Critical Thinking

7. What would happen if all the magnets in your kitchen stopped working?
# Everyday Magnets

Read each word in the puzzle. Color the word blue if it tells about magnets. Color the word green if a magnet will attract it. Color the word red if a magnet will not attract it.

<table>
<thead>
<tr>
<th>Iron</th>
<th>Fork</th>
<th>Poles</th>
<th>Paper cup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencil</td>
<td>Metal toy car</td>
<td>Plastic straw</td>
<td>Repel</td>
</tr>
<tr>
<td>Can lid</td>
<td>Attract</td>
<td>Green plant</td>
<td>String</td>
</tr>
<tr>
<td>House key</td>
<td>Metal scissors</td>
<td>Cookie</td>
<td>Nickel</td>
</tr>
</tbody>
</table>
Everyday Magnets

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

Magnets have many everyday uses. Magnets are used to _____________ things, or pull them _____________. In the kitchen, magnets help ____________ cabinet doors. Can openers use magnets to lift the ____________ from a can.

Magnets are also used in other ways. Very large magnets can lift a heavy piece of ____________ from a pile of trash. Some toys use magnets to help them _____________.

These are only some of the uses of magnets.
Magnets Attract

Read the Reading in Science pages in your book. As you read, think about all the different ways that people use magnets every day. Summarize them in the chart below. Remember, when you summarize, you list the most important idea and details from the selection.

Main Idea

Detail #1

Detail #2

Detail #3
Write About It

1. **Summarize.** How do people use magnets every day? Use the chart you made to write your answer.

   ____________________________________________

   ____________________________________________

   ____________________________________________

   ____________________________________________

   ____________________________________________

2. What are some magnets that you use at home?

   ____________________________________________

   ____________________________________________

   ____________________________________________

   ____________________________________________
Pushes, Pulls, and Magnets

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

- attract
- gravity
- repel
- friction
- poles
- weight

1. The north pole of one magnet and the north pole of another magnet will ___________ each other.

2. A force that slows down moving things is called ___________.

3. Every magnet has two ___________.

4. A magnet will ___________ an object made of iron.

5. The amount of force that pulls an object toward Earth is its ___________.

6. The force that pulls things toward the ground is called ___________.

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Use the clues to fill in the crossword puzzle.

Down
1. force that slows down objects
2. move away
3. force that pulls objects to Earth

Across
1. push or pull
4. move toward
5. object with a north and a south pole
Magnet

Read the poem in your book.

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?

________________________________________________________________________

________________________________________________________________________