Reading and Writing in Science
Life Science

Chapter 1 Plants and Their Needs .............................................. 1
Chapter 2 Animals and Their Needs ........................................... 21
Chapter 3 Plants and Animals Together .................................... 41

Earth Science

Chapter 4 Weather ............................................................... 65
Chapter 5 Seasons ............................................................... 85

Physical Science

Chapter 6 Solids, Liquids and Gases ........................................ 109
Chapter 7 Changing Solids, Liquids and Gases ...................... 133
CHAPTER 5
Seasons

Chapter Concept Map .................................................. 85
Chapter Literature: Poem (“Sunflakes” by Frank Asch) .............. 86

Lesson 1
Lesson Outline .............................................................. 87
Lesson Vocabulary ....................................................... 89
Cloze Test ................................................................. 90

Lesson 2
Lesson Outline .............................................................. 91
Lesson Vocabulary ....................................................... 93
Cloze Test ................................................................. 94
Reading in Science ....................................................... 95

Lesson 3
Lesson Outline .............................................................. 97
Lesson Vocabulary ....................................................... 99
Cloze Test ................................................................. 100
Writing in Science ....................................................... 101

Lesson 4
Lesson Outline .............................................................. 103
Lesson Vocabulary ....................................................... 105
Cloze Test ................................................................. 106

Chapter 5 Vocabulary ................................................... 107
# Contents

## PHYSICAL SCIENCE

### CHAPTER 6

**Solids, Liquids, and Gases**

- **Chapter Concept Map** ................................................................. 109
- **Chapter Literature: Poem (“Our World” by Meish Goldish)** ............ 110

#### Lesson 1

- **Lesson Outline** ................................................................. 111
- **Lesson Vocabulary** .......................................................... 113
- **Cloze Test** ................................................................. 114

#### Lesson 2

- **Lesson Outline** ................................................................. 115
- **Lesson Vocabulary** .......................................................... 117
- **Cloze Test** ................................................................. 118
- **Writing in Science** .......................................................... 119

#### Lesson 3

- **Lesson Outline** ................................................................. 121
- **Lesson Vocabulary** .......................................................... 123
- **Cloze Test** ................................................................. 124

#### Lesson 4

- **Lesson Outline** ................................................................. 125
- **Lesson Vocabulary** .......................................................... 127
- **Cloze Test** ................................................................. 128
- **Reading in Science** .......................................................... 129

**Chapter 6 Vocabulary** .......................................................... 131
## Contents

### CHAPTER 7

**Changing Solids, Liquids, and Gases**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Concept Map</td>
<td>133</td>
</tr>
<tr>
<td>Chapter Literature: Poem (“Popcorn Hop”</td>
<td>134</td>
</tr>
<tr>
<td>by Stephanie Calmenson</td>
<td></td>
</tr>
<tr>
<td>Lesson 1</td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>135</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>137</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>138</td>
</tr>
<tr>
<td>Lesson 2</td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>139</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>141</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>142</td>
</tr>
<tr>
<td>Reading in Science</td>
<td>143</td>
</tr>
<tr>
<td>Lesson 3</td>
<td></td>
</tr>
<tr>
<td>Lesson Outline</td>
<td>145</td>
</tr>
<tr>
<td>Lesson Vocabulary</td>
<td>147</td>
</tr>
<tr>
<td>Cloze Test</td>
<td>148</td>
</tr>
<tr>
<td>Writing in Science</td>
<td>149</td>
</tr>
<tr>
<td>Chapter 7 Vocabulary</td>
<td>151</td>
</tr>
</tbody>
</table>

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

air  roots  space  water
flowers  leaves  stems
fruit  seeds  sunlight
Tommy

Read the poem on page 22.

Write About It

Response to Literature

1. What did the poet do to help the seed grow?

2. What else do you think seeds need to grow?

3. Draw a picture that shows what the poet is writing about. Use drawing paper.
Plants Everywhere

Use your book to help you fill in the blanks.

What are plants?

1. Just like you, ________________ are living things.

2. ________________ from plants grow into new plants.

3. The seeds will make a new plant that looks like ________________
   the ________________ plant.

4. Not all plants look the ________________.

Where do plants live?

5. Plants live almost everywhere on ________________.
6. Plants have __________ that help them live in different habitats.

7. A __________ is the place where plants get what they need to live.

8. __________ habitats are very wet.

Summarize the Main Idea

9. What are some things that make you like a plant? What are some things that make you different?
Plants Everywhere

Complete the sentence that tells about each picture. Use the words in the box.

<table>
<thead>
<tr>
<th>plants</th>
<th>habitat</th>
</tr>
</thead>
</table>

1. These ________________ have special leaves that help them live in this rainforest.

2. This barrel cactus has thick skin and parts that help it live in this desert ________________.
Plants Everywhere

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

rainforest   seeds   parent   plants   habitats

Plants can live just about anywhere on Earth. They have parts that help them live in different habitats. Plants that live in the rainforest have long pointed leaves that help them live in wet places. In the desert, there is very little rain. Plants that live there have thick skins that hold a lot of water. Many new plants grow from seeds. The new plants will look just like their parent plants. A tall parent plant will make new plants that will be tall, too.
What Plants Need

Use your book to help you fill in the blanks.

Do all plants need the same things to grow?

1. Plants need water, air, _________________, and sunlight to grow.

2. Some plants need a _________________ place with a lot of sun to grow.

3. Other plants grow in _________________ places.

How do plants use sunlight?

4. All living things need _________________ to live and grow.

5. Plants get the energy they need to live from _________________ the _________________.

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Chapter 1 • Plants and Their Needs
Reading and Writing in Science

Use with Lesson 2
What Plants Need

7
6. Plants grow toward the Sun to help them ________________.
   make ________________.

7. Some plants need a lot of sunlight to ________________.

8. Other plants can grow with only a ________________ sunlight.

Summarize the Main Idea

9. What do plants need to grow?

   ________________
   ________________
   ________________
   ________________
   ________________
   ________________
   ________________
   ________________
   ________________
What Plants Need

Look at each picture. Then answer the questions below.

Circle the best answer.

1. Which way are the plants in the picture growing?
   - away from the Sun
   - toward the Sun
   - toward the ground

2. How does the Sun help the plants in the pictures?
   - It gives them energy.
   - It gives them a tan.
   - It keeps them warm.
What Plants Need

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

Plants need four things to grow and be healthy. All plants must have ________________
----------

_______________ to keep them from drying out. Plants also need air and

_______________ around them to grow larger.

All plants need ________________ , too. The Sun

_______________ gives plants the ________________ they need to make their own food.
Strawberry Fields

Read the Reading in Science pages in your book. Start with page 38. Look for the main idea and details as you read. Remember, the main idea is the most important idea in the reading selection. Details give more information about the main idea. Fill in the web below. Write the main idea in the top circle. Write three details in the other circles.
Write About It

Find Main Idea and Details  What do strawberry plants need to help them grow? Finish this summary. Use the Main Idea and Details web you made on page 11.

Strawberry plants need three things to grow. They need __________________________________________.

need __________________________________________.

They also need __________________________________________.

Strawberries also need __________________________________________ to help them grow.
Parts of Plants

Use your book to help you fill in the blanks.

What are the parts of a plant?

1. Plants have _________________ to help them get what they need.
2. _________________ use sunlight and air to make food.
3. Water and food move through the _________________ of the plant.
4. Some flowers grow into _________________.
5. Fruits have _________________.
What do roots do?

6. A plant’s ____________________ take in water and nutrients from the soil.

7. Nutrients help the plant ____________________.

8. Roots keep plants in the ____________________.

9. Roots store ____________________ for some plants.

Summarize the Main Idea

10. What do plant parts do?
# Parts of Plants

Label each plant part. Use the words from the box.

<table>
<thead>
<tr>
<th>seeds</th>
<th>stems</th>
<th>roots</th>
</tr>
</thead>
<tbody>
<tr>
<td>fruit</td>
<td>leaves</td>
<td>flowers</td>
</tr>
</tbody>
</table>

1. 
- ____________
- ____________
- ____________

2. 
- ____________
- ____________
- ____________

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Parts of Plants

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

Different plant parts help a plant get what it needs to live. A plant uses its ________________ to make food.

Water and food pass through the ________________ of a plant. The ________________ hold a plant in the soil. They also take in ________________ from the soil.

Nutrients help the plant grow. A plant’s fruits have ________________. New plants can grow from these seeds.
Writing in Science

Write About It
Tell about a plant. Describe it.

Getting Ready
Use the web. Write the name of your plant in the center. Write describing words in the circles.
Write about your plant. Start with a main idea. Write sentences that describe the plant.

Revising and Proofreading
Now look at your paragraph. Ask yourself:

• Did I write a main idea about my plant?
• Did I include information to describe it?
• Did I correct all mistakes?
Search-a-Word

Circle the six vocabulary words hiding in the puzzle. Look across and down. The word roots is used two times. Can you find it?

energy roots plants
habitat seeds fruit

b f d f i n h s
e r o o t s a e
n u p r m e b e
e i t x y l i d
r t p l a n t s
y e l r o o t s

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All About Plants

Draw a line from the picture to the word that tells about the picture.

1. fruit
2. plants
3. habitat
4. energy
5. roots
6. seeds
Fill in the important ideas as you read the chapter. Use the words in the box.

air  food  move  water
birds  insects  reptiles
breathe  mammals  shelter
Giraffes

Read the poem on page 62.

Write About It
Response to Literature

1. Write two things from the poem that tell what giraffes look like?
   1. ______________________________________________________________
   2. ______________________________________________________________

2. Write a sentence that tells about an animal that you like. Tell why you like this animal. Draw a picture.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
Animals Everywhere

Use your book to help you fill in the blanks.

What are some kinds of animals?

1. ____________ are a group of animals with hair or fur.

2. Mammals take care of their ____________.

3. Birds are a group of animals that have ____________.

4. Young birds hatch from ____________.

What are some other types of animals?

5. Reptiles have dry skin that is covered with ____________. 

Chapter 2 • Animals and Their Needs
Reading and Writing in Science
6. Snakes, lizards, and alligators are all ________________
   ____________ ____________ ____________ ____________
   ____________________.

7. Ants, butterflies, and grasshoppers are ________________
   ____________ ____________ ____________ ____________
   all ____________________.

8. Insects are animals that have three body parts ________________
   ____________ ____________ ____________ ____________
   and ____________________ legs.

Summarize the Main Idea

9. What are some kinds of animals? How are they different?
   ______________________________________
   ____________ ____________ ____________ ____________
   ______________________________________
   ______________________________________
   ____________ ____________ ____________ ____________
   ______________________________________
   ______________________________________
Animals Everywhere

Use the picture clues to help you solve these crisscross puzzles. Use the words from the box.

| insect | mammal | reptile | bird |

1. [Image of a lizard]
2. [Image of a raccoon]
3. [Image of a bird and eggs]
4. [Image of a bee]
Animals Everywhere

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

Body coverings help animals live in their habitats. Fur helps some ________________ stay warm in cold habitats. Birds use their covering ________________ of ________________ to help them fly over the trees.

A reptile’s smooth ________________ help it live in hot, dry places. Body coverings can also help you tell different kinds of animals apart.

mammals
scales
feathers
What Animals Need

Use your book to help you fill in the blanks.

What do animals need?

1. Animals are ____________ things.

2. They need food, water, air, and a ____________ place to live.

3. Animals live in ____________ kinds of places.

4. A ____________ is a place where animals can live and be safe.
Outline

What parts do animals have?

5. Animals have different ________________ to get what they need.

6. Some animals have ________________ that help them move fast.

7. ________________ help fish swim.

8. ________________ help birds fly to find food.

Summarize the Main Idea

9. What are some things animals need to live?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
What Animals Need

Unscramble the word. Then write it on the line.

relshet

1. A hole in a tree can be a __________________ for an owl.

nisf

2. Legs, __________________, and wings are some of the body parts that animals use to help them move.

gusln

3. Mammals and birds have __________________ that help them get air.

glils

4. Fish use __________________ to help them get air.
What Animals Need

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

Animals use different body parts to help them get what they need. Legs, ____________, and wings help animals move. Moving lets animals find water, food, and _____________. Body parts also help _____________.

animals get _____________. Some animals, like mammals and birds, have noses and _____________.

_________ to help them get air.

Other animals, like fish, have _____________. By using their body parts, animals get air, food, water, and shelter.
Writing in Science

Write About It

If you have a pet, write about how you make sure it gets what it needs.

If you don’t have a pet, write about a pet you wish you had. Draw a picture to go along with your writing.

Getting Ready

Write the name of your pet in the center of the star. Write what it needs in the points.
Drafting

The main idea is the most important idea. Write a main idea about you and your pet.

Now write about you and your pet. Begin with your main idea sentence. Tell about your pet’s needs.

Revising and Proofreading

Now look at your paragraph. Ask yourself:

• Did I begin with my main idea?
• Did I include information about the pet’s needs?
• Did I correct all mistakes?
How Animals Get Food

Use your book to help you fill in the blanks.

What animals eat plants?

1. Animals eat food to get the ____________ they need to live.

2. Different ________________ eat different things.

3. Some animals are ________________.

4. A herbivore is an animal that eats only ________________

What animals eat meat?

5. Some animals are ________________.
6. A carnivore is an animal that eats only
   other .

7. Tigers, , and eagles are all carnivores.

Summarize the Main Idea

8. How do animals get the energy they need? Tell the difference between meat-eating and plant-eating animals.
How Animals Get Food?

Write a word from the box to tell about each picture or complete each sentence below.

<table>
<thead>
<tr>
<th>herbivore</th>
<th>carnivore</th>
</tr>
</thead>
</table>

1. ____________

2. ____________

3. ____________

4. ____________

5. The teeth of a ____________ are sharp and pointed so it can eat meat.

6. The teeth of a ____________ are large and flat so it can eat plants.
What Animals Need

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

Animals use their teeth to get the food they need. Animals that eat ________________ have sharp, pointed teeth. Scientists call these ________________ animals ________________ . Animals that eat ________________ have large, flat teeth. Scientists call these animals ________________ .

People have both kinds of teeth, which help them eat both meat and plants.
Meet Jin Meng

Read the Reading in Science pages in your book. Start with page 88. Look for information that you can compare and contrast as you read. Remember, to compare is to decide how things are alike. To contrast is to decide how things are different. Fill in the diagram below. Tell how a dinosaur that eats meat is different from a dinosaur that eats plants.

Meat-eating Dinosaur

Plant-eating Dinosaur

Name __________________________ Date _____________

Chapter 2 • Animals and Their Needs
Reading and Writing in Science

Use with Lesson 3
How Animals Get Food
Write About It

Compare and Contrast  How does a scientist who studies fossils recognize a meat-eating dinosaur? Finish this explanation. Use the Compare and Contrast diagram you made on page 37.

Scientists who study fossils can tell if a dinosaur is a

__________________________

meat eater or a plant eater by __________________________.

__________________________

The teeth of meat eaters are __________________________.
The teeth of plant eaters are flat and wide. Scientists also look at the dinosaur’s stomach. A meat eater may

__________________________

have __________________________ in its stomach. A plant eater does not.
Vocabulary

CHAPTER LEVEL

Animal Scramble

Unscramble each word. Write it on the line.

dirb
________________________

1. A ________________ is an animal covered with feathers.

stcien
________________________

2. An ________________ is an animal with three body parts and six legs.

etrpile
________________________

3. A ________________ has dry skin that is covered with scales.

ehtselr
________________________

4. A ________________ is a place where animals can live and be safe.
Which Word?

Circle the words in each box that tell about the word at the top of the box.

5. herbivore
   - plant eater
   - meat eater
   - cow
   - lion
   - flat teeth

6. carnivore
   - giraffe
   - cat
   - flat teeth
   - pointed teeth
   - meat eater

7. mammal
   - live young
   - dry skin
   - fur or hair
   - six legs
   - lungs

8. birds
   - wings
   - feathers
   - hard shell on back
   - lay eggs
   - gills
Complete this food chain to show how plants and animals need each other. Use the words in the box.

wolf  carrots  Sun  rabbit

1.  

2.  

3.  

4.  

Name ______________________________ Date ____________
To Be a Clover

Read the poem on page 102.

Write About It

Response to Literature

1. Would the poet like to be a clover or a leaf? Use the poem to tell how you know.

2. A bee and a grasshopper are insects. Name two more insects that you know.

3. Do you think “To Be a Clover” is a good title for the poem? Why or why not?
Land Habitats

Use your book to help you fill in the blanks.

How do plants and animals live in a grassland?

1. Many animals live in _____________.

2. A grassland is a ____________ place with a lot of grass.

3. An ____________ is a special feature that helps an animal stay alive in its habitat.

4. ____________ have long necks that help them spot animals that might want to eat them and to eat the leaves off tall trees.

5. A tree can be a ____________ for many animals and even for other plants.
Land Habitats

How do plants and animals live in a forest?

6. A _________________ is a place where there are a lot of trees.

7. Some animals use the trees for _________________.

Summarize the Main Idea

8. How do plants and animals live in land habitats?
Land Habitats

Circle the name of the habitat shown in each picture. Then tell about an adaptation that helps the animal live in this habitat.

1. [Image of bird in forest]
   desert
   forest
   grassland

2. [Image of giraffe in savanna]
   forest
   desert
   grassland
Land Habitats

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

- trees
- adaptation
- forest
- grassland

Different plants and animals live in different land habitats. A grassland and a __________ are two of these habitats. To live in a __________, plants and animals must adapt to a grassy, dry place. A forest is a place with __________. Forest plants and __________ animals have __________ that help them get what they need.
Water Habitats

Use your book to help you fill in the blanks.

What lives in a pond?

1. A pond is a small body of _________________ water.

2. Fresh water has little or no _________________ in it.

3. Plants and animals _________________ together in ponds.

4. Many animals find food and shelter in a _________________.
What helps plants and animals live in the ocean?

5. An ___________ is salty water that is very large and deep.

6. There are many different mammals, fish, and ___________ plants that ___________ in the ocean.

7. They need each other to ___________ in the ocean.

Summarize the Main Idea

8. How do plants and animals live in water habitats?
Water Habitats

Circle the name of each habit shown in the picture. Then tell how living things have adapted to these habitats.

1. ocean
   pond
   puddle

2. puddle
   pond
   ocean
Water Habitats

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

ocean
pond
salt
fresh

Did you know that water could be a habitat for plants and animals? A __________ is a small body of __________ water. Water that is __________ has little or no salt in it. An __________ is another kind of water habitat. It is a large, deep body of __________ water. Plants and animals live together in ponds and oceans. They help each other survive in their habitats.
Meet Mark Siddall

Read the Reading in Science pages in your book. Start with page 118. Think about how to classify and categorize the information as you read. Remember, when you classify and categorize, you put things that are alike into groups. Fill in the chart below.

Where do leeches belong?

<table>
<thead>
<tr>
<th>Animals that Live in Water</th>
<th>Animals that Do Not Live in Water</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Why do leeches belong in this group?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Write About It

Classify and Categorize  What is another animal that can live in water? Draw the animal. Then tell how you know the animal lives in water. Use what you know and ideas from the Classify and Compare chart you made on page 51.

A ___________________ lives in water.
Plants and Animals Need Each Other

Use your book to help you fill in the blanks.

How do plants and animals help each other?

1. Plants help ________________ live.

2. Animals use ________________ for shelter and food.


4. Bees carry ________________ from flower to flower.

5. Pollen is powder inside a flower that makes ________________.

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Why do some animals need other animals?

6. Animals need each ______________ to survive.

7. Sometimes animals can be ______________ to one another.

8. Other times, one animal is helped and the other ______________ animal is ______________.

Summarize the Main Idea

9. What are some ways plants and animals help each other?

____________________________________________________________________________________

____________________________________________________________________________________
Plants and Animals Need Each Other

Tell how plants help animals survive.

Tell how animals help plants survive.

Tell how some animals help other animals survive.
Plants and Animals Need Each Other

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

animals  plants  seeds  shelter

Animals and plants help each other in many ways.

Animals can use ____________ for food.

Animals can use plants for ____________ , too. Animals can help plants by carrying pollen or ____________ . Animals may also need other ____________ to stay alive. Some animals eat or even live on other animals.
Food Chains

Use your book to help you fill in the blanks.

What is a food chain?

1. All living things need _________________.

2. Food gives them _________________.

3. A ________________ shows the order in which living things get the food they need.

4. Herbivores eat _________________.

5. Carnivores eat _________________.

6. An ________________ eats both plants and animals.
How does energy go through a food chain?

7. The Sun is the ______________ of every food chain.

8. Plants are the ______________ link in most food chains.

9. People are at the ______________ of many food chains.

Summarize the Main Idea

10. What is a food chain?
Food Chains

Read the sentences about food chains. Write YES if the sentence is true. Write NO if the sentence is not true.

1. All living things get energy from food. [YES/NO]
2. A food chain shows the order in which living things get the food they need. [YES/NO]
3. The beginning of every food chain is the Sun. [YES/NO]
4. Plants get energy from the soil to make food. [YES/NO]
5. People are at the top of many food chains. [YES/NO]
6. Omnivores eat only animals. [YES/NO]
Food Chains

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

food chain  Sun  plants  animals  link  omnivore

A ____________ shows how energy passes through living things. At the beginning of every food chain is the _____________. Plants are the first _____________.

______________ in most food chains. The next link is made up of animals that eat _____________.

______________ . After that are the animals _____________.

that eat other _____________. An ____________ is a living thing that eats plants and animals. Omnivores, such as people, are at the top of many food chains.
Write About It

Write about how the arctic fox gets what it needs to survive.

Who? __________________________________________

Who is the animal? __________________________________________

What? __________________________________________

What does it eat? __________________________________________

When? __________________________________________

When does it do this? __________________________________________

Where? __________________________________________

Where does it do this? __________________________________________

How? __________________________________________

How does it do it? __________________________________________
Drafting

The main idea is the most important idea. Write a main idea about the arctic fox.

Now write your paragraph.

Revising and Proofreading

Now look at your paragraph. Ask yourself:

- Did I begin with a main idea?
- Did I describe what the arctic fox eats?
- Did I correct all spelling, punctuation, and capital letter mistakes?
Plants and Animals

Use the words in the box and the clues below to solve the puzzle.

<table>
<thead>
<tr>
<th>grassland</th>
<th>adaptation</th>
<th>forest</th>
<th>omnivore</th>
</tr>
</thead>
<tbody>
<tr>
<td>pond</td>
<td>ocean</td>
<td>food chain</td>
<td></td>
</tr>
</tbody>
</table>

Across
1. Shows what animals eat
5. Dry, grassy place
6. Small body of fresh water
7. Place with many trees

Down
2. Large, deep body of salt water
3. A special feature that helps an animal survive, like a giraffe’s long neck
4. Eats plants and animals
Plants and Animals

Circle the word that tells where each animal lives.

8. ocean  pond
9.  forest  grassland

10. grassland  forest
11. pond  ocean
Label each part of this diagram. Use the words in the box.

cloud  rain  Sun  water
Sudden Storm

Read the poem on page 152.

Write About It

Response to Literature

1. Why does the poet say that umbrellas are like mushrooms?

2. Do you think “Sudden Storm” is a good title for the poem? Why or why not?
Describe Weather

Use your book to help you fill in the blanks.

What is weather?

1. Weather is what the air and ________________ are like each day.

2. The air might be warm or ________________.

3. The sky might be ________________ or cloudy.

4. The ________________ might be rainy, snowy, or dry.

5. Weather ________________ from day to day.
6. __________ is how warm or cold the air is.

7. The __________ can change, too.

8. Some days the sky is __________ of clouds.

9. __________ can change too.

10. Wind is __________ air.

Summarize the Main Idea

II. What is weather?

Weather is __________


Describe Weather

Unscramble each word. Write it on the line. Use the words in the box.

<table>
<thead>
<tr>
<th>temperature</th>
<th>weather</th>
<th>wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>niwd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Moving air is called __________________________.

ethrwae

2. You can tell the __________________________ by what the air and sky are like.

3. If you know how hot or cold the air is, you know terretupmae

the __________________________.

Circle the best answer.

4. How can you tell if it is hot enough to swim?

   You can check the clouds.

   You can check the temperature.
Describe Weather

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

<table>
<thead>
<tr>
<th>air</th>
<th>sunny</th>
<th>weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>sky</td>
<td>temperature</td>
<td>wind</td>
</tr>
</tbody>
</table>

Is it rainy, sunny, or cool? The ________________ is always changing. Some days the ________________ moves fast. The air ________________ is cold. Rain falls from the ________________. Other days, the ________________ feels warm. The sky is clear ________________ and ________________. On days like this, we wish the weather would never change.
The Warmth of the Sun

Use your book to help you fill in the blanks.

What does the Sun do?

1. The Sun is a __________________ .

2. The __________________ of the Sun warms the land, air, and water.

3. It helps to make wind, ________________, clouds, and even snow.

What does the Sun do to water?

4. As the Sun warms water, some water turns into ________________ .

5. Water vapor is water that goes up into the ________________ .
6. As water vapor ________ in the sky, it turns back into drops of water or bits of ice.

7. ________ are made of water and bits of ice.

8. When the water drops or bits of ice get big, they fall to ________ as rain or snow.

**Summarize the Main Idea**

9. What is one way the Sun’s energy helps Earth?

   The Sun’s energy ________
The Warmth of the Sun

Look at the diagram. Label the parts. Use the words in the box.

- water vapor
- water
- rain
- cloud
- Sun

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The Warmth of the Sun

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

clouds  Sun  water  water vapor

The Sun helps make rain and snow. When energy
from the Sun hits water, the water warms up. Some of the water turns into

and goes up into the air. When

it cools, it turns back into

drops. These drops form

When the water drops or bits of ice get big, they fall back to Earth as rain or snow.
Writing in Science

Write About It
Write a story about this boy. Make sure to write about the weather in your story.

Getting Ready
Look at the picture. Write words that tell how the boy feels in the chart below.

Drafting
The main idea is the most important idea. Write the main idea of your story.
Now write your story. Begin with the sentence you just wrote. Tell why the boy has a problem. At the end, tell how the boy solves his problem.

Revising and Proofreading

Now look at your paragraph. Ask yourself:

- Did I begin in an interesting way?
- Did I describe the weather?
Measure Weather

Use your book to help you fill in the blanks.

How can you measure weather?

1. You can use _________________ to measure weather.

2. A _________________ measures the temperature of air and water.

3. A _________________ measures how much rain falls.

4. A wind vane shows the _________________ of the wind.
How can you learn more about weather?

5. Scientists also use tools to measure
   ____________________________
   ____________________________

6. They use the information they collect to make
   ____________________________
   ____________________________

7. You can read weather reports in the
   ____________________________
   ____________________________

Summarize the Main Idea

8. How can you measure weather?
   ____________________________
   ____________________________

People use tools such as ____________________________
Measure Weather

Draw lines. Match the pictures and words.

1. wind vane  a.  
2. thermometer  b.  
3. weather report  c.  
4. rain gauge  d.  

Circle the best answer.

5. What do all the tools shown above measure?
   - clouds
   - air temperature
   - weather
Measure Weather

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

thermometer  rain gauge  wind

Scientists use special tools to measure weather. They _ _ _ _ _ _ _ _ _ _ use a _ _ _ _ _ _ _ _ _ _ to measure rainfall. They use a wind gauge to find out the direction _ _ _ _ _ _ _ _ _ _ of the _ _ _ _ _ _ _ _ _ _ . To measure air and _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ water temperature, they use a _ _ _ _ _ _ _ _ _ _ _ _ . Scientists use all this weather information to make weather reports.
Weather Tool

Read the Reading in Science page 178 in your book. Look for information that can help you make a prediction as you read. Fill in the chart below. Write your prediction about the storm. Tell what clues helped you make your prediction.

<table>
<thead>
<tr>
<th>What I Predict</th>
<th>Clues I Used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>
Write About It

Where will the storm go next? Predict. Use the Prediction chart you made on page 81.

I predict that by night the storm will go ____________________________ .

I think this because ____________________________ .
Weather

Draw a line from the picture to the word that tells about it. Write the words you matched.

1. ___________________________     rain gauge

2. ___________________________     wind vane

3. ___________________________     thermometer

_________________________     ________________
1. ___________________________     2. ___________________________

_________________________     ___________________________
3. ___________________________
Weather Words

Circle the words in each box that tell about the word at the top of the box.

4. temperature
- thermometer
- hot
- wind vane
- cold
- rain gauge

5. temperature
- in books
- in newspapers
- on TV
- on the Internet
- in movies

6. weather tools
- rain gauge
- water vapor
- wind vane
- Sun’s energy
- thermometer

7. Sun
- star
- energy
- cold
- heat
- ice
Seasons

The name of a season is on the top line in each box. Tell what you can predict about the temperature and rain or snowfall in each season.

winter

1. 

2. 

spring

1. 

2. 

fall

1. 

2. 

summer

1. 

2.
Sunflakes

Read the poem on page 192.

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 you do in July?

3. In what season do you think people go sleighing?

4. What do you think sunflakes look like?
   Draw a picture.
Winter

Use your book to help you fill in the blanks.

How do you know when it is winter?

1. Winter is the ________ season.

2. A ________ is a time of year.

3. In winter, there are ________ hours of sunlight than in spring or summer.

4. With less ________, plants have less energy to make food.
What is winter weather like?

5. When winter is cold, there is not a lot of ________
   ________ for animals to eat.

6. In some places, it ________ in winter.

7. In most places in California, it does not get ________
   ________ enough to snow.

8. It might ________ a lot instead.

Summarize the Main Idea

9. What happens during winter? How does the weather change?

   ________

   ________
Winter

Read the sentences about each boxed word. Write YES if the sentence is true. Write NO if the sentence is not true.

1. A season is a time of year.
   YES

2. There are two seasons of the year.
   YES

3. Winter is the coldest season.
   YES

4. Many plants grow new leaves in winter.
   NO

5. Some animals store food to eat in winter.
   YES

6. It may snow or rain a lot in winter.
   YES
Winter weather affects plants, animals, and people. 

In winter the temperature is colder. 

It may get so cold that it snows. 

People often wear coats and hats to stay warm. 

Plants may die or lose their leaves because there are fewer hours of sunlight. 

Animals may find it hard to find food.
Outline

Spring

Use your book to help you fill in the blanks.

How do you know when it is spring?

1. __________ is the season after winter.

2. In spring many __________ are born.

3. In spring, there are more hours of __________ than in winter.

4. The extra sunlight helps to __________ the land, air, and water.
What happens in spring?

5. When spring comes, the ______ gets warmer.

6. Rain and warmth from the Sun help ______

7. Some ______ build nests for their young.

Summarize the Main Idea

8. What happens during spring? How does the weather change?
# Spring

Write what each picture shows about spring in California.

<table>
<thead>
<tr>
<th>Picture 1</th>
<th>Picture 2</th>
<th>Picture 3</th>
<th>Picture 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image]</td>
<td>[Image]</td>
<td>[Image]</td>
<td>[Image]</td>
</tr>
</tbody>
</table>

- ______________________
- ______________________
- ______________________
- ______________________

- ______________________
- ______________________
- ______________________
- ______________________

- ______________________
- ______________________
- ______________________
- ______________________

- ______________________
- ______________________
- ______________________
- ______________________

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

Sun    longer    daylight    weather

Many people look forward to spring. In spring, the ________________

__________________ warms up. The days are ________________

__________________ . The extra hours of ________________

__________________ help plants grow. Rain and ________________

warmth from the ________________ also help new plants. Spring is a good time for people to plant gardens.
Museum Mail Call

Read the Reading in Science beginning on page 208. Fill in the diagram below. Write the important ideas in the small boxes. Then retell these ideas in the big box.

[Diagram with four sections for writing]
Write About It

Summarize What happens in spring to help the Hunza farmers’ seeds grow?
Finish this summary. Use the Summarize chart you made on page 95.

In spring, the __________________________________________________________________ in the mountains of Pakistan. The Hunza farmers ___________________________________________________________________________________________ to bring this __________________________________________________________________________ water to their land. This water __________________________________________________________________________ .
Summer

Use your book to help you fill in the blanks.

How do you know when it is summer?

1. __________________ is the season after spring.

2. There are more hours of __________________ in summer than in any other season.

3. Some animals have __________________ to the hot Sun.

4. Other animals look for __________________ to stay cool.
What is summer weather like?

5. ________________ have very hot summers.

6. ________________ is the hottest and driest place in California.

7. Summer might be ________________ near the water or in the forest.

Summarize the Main Idea

8. What happens during summer? What is summer like in California?
Summer

Read each sentence. Write YES if it tells about summer in California. Write NO if the sentence does not tell about summer in California.

1. The weather can be different in different places in California. YES

2. The summer is hot and dry in most places in California. YES

3. Summer weather is often warmer in the deserts. YES

4. Summer has more hours of sunlight than fall. YES

5. The hottest place in California is near the water. YES

6. Death Valley is the driest place in California. YES
Summer

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

dry  temperature  sunlight  shade

What makes summer different from the other seasons in California? Summer has more hours of

__________________________ than fall. The hot Sun makes

__________________________ the ________________ rise. Some plants and animals like the heat while others like the

__________________________ . In many places, it is very

__________________________ . To cool off, many people visit spots near the water.
Writing in Science

Write About It

Write about one of the pictures. Describe the weather and what you think it would feel like if you were there.

Getting Ready

Pick one of the pictures. Imagine yourself there. What would you see, hear, smell, and feel? Write your ideas in the chart.

<table>
<thead>
<tr>
<th>See</th>
<th>Hear</th>
<th>Smell</th>
<th>Feel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Drafting

Write your paragraph. Start with a main idea. Describe the weather and how it makes you feel. Indent the first line.

Now look at your paragraph. Ask yourself:

- Did I begin with a main idea?
- Did I describe the weather and how it makes me feel?
- Did I correct all mistakes?
Fall

Use your book to help you fill in the blanks.

How do you know when it is fall?

1. ______________ is the season after summer.

2. Some ______________ change color in fall.

3. In fall, there are ______________ hours of sunlight than in summer.

4. Some places in California stay ______________ all year.

5. In these places the leaves do not ______________ color.
What happens in fall?

6. In many places it ________________ more in fall than in summer.

7. In fall, many ________________ begin storing food for winter.

8. Some fruits get ________________ in the fall.

9. People can ________________ the fruits and eat them.

Summarize the Main Idea

10. How does the weather change in Fall?
Fall

Write what each picture shows about fall in California.

1.

2.

3.

4.
Fall is a season of many changes. The air may get _______ ___________ ___________. In fall, there are _______ ___________ _______ ___________. Some _______ ___________ _______ hours of sunlight. Some _______ ___________ _______ on trees gets ripe. Some _______ ___________ _______ change color in the fall. In _______ ___________ _______ many places, it _______ ___________ more in fall than in summer. Some animals leave for warmer places before winter comes.
Seasons

Circle the five vocabulary words hiding in the puzzle. Look across and down. The word spring is hidden two times. Can you find it?

<table>
<thead>
<tr>
<th>season</th>
<th>winter</th>
<th>fall</th>
<th>summer</th>
<th>spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>t r e s p w v</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w y f i r i n</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s e a s o n m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p h l u s t l</td>
<td></td>
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<td></td>
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<tr>
<td>r n l m d e k</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>i f l m b r i</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>n g u e c t s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g s p r i n g</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Answer the question below:

I. What do these words have in common?

- - - - - - - - - - - - - - - - - -
### Which Word?

Circle the words in each box that tell about the word at the top of the box.

<table>
<thead>
<tr>
<th></th>
<th>2. fall</th>
<th>3. spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>follows summer</td>
<td>very dry</td>
</tr>
<tr>
<td></td>
<td>most sunlight</td>
<td>new plants</td>
</tr>
<tr>
<td></td>
<td>often snows</td>
<td>follows winter</td>
</tr>
<tr>
<td></td>
<td>leaves change colors</td>
<td>falling leaves</td>
</tr>
<tr>
<td></td>
<td>cooler weather</td>
<td>warmer weather</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>4. summer</th>
<th>5. winter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>follows fall</td>
<td>less sunlight</td>
</tr>
<tr>
<td></td>
<td>most sunlight</td>
<td>very dry</td>
</tr>
<tr>
<td></td>
<td>very rainy</td>
<td>coldest temperatures</td>
</tr>
<tr>
<td></td>
<td>hot sun</td>
<td>new leaves</td>
</tr>
<tr>
<td></td>
<td>warmest temperatures</td>
<td>follows fall</td>
</tr>
</tbody>
</table>
Solids, Liquids, and Gases

Name each kind of matter. Then tell about its properties. Use the words in the box.

| solid | gas | liquid |

Kinds of Matter

- Keeps own shape
- Takes shape of what it’s in
- Flows up, down, and around
Our World

Read the poem on page 242.

Write About It

Response to Literature

1. What are two things the poet tells about in our world? How does he tell about them.

2. Describe two more things in our world.

3. Why do you think the poet says that air is clear?

4. Draw a picture that shows what the poet is writing about. Use drawing paper.
Describing Matter

Use your book to help you fill in the blanks.

What are the properties of matter?

1. Properties are how something looks, feels, ________________, or tastes.

2. Color, size, and shape are also ________________.

3. Every kind of ________________ has its own properties.

4. Matter is what ________________ things are made of.

How can you measure matter?

5. All matter takes up ________________.
6. You ________________ to find out the size or amount of something.

7. You can use a ________________ to measure how long something is.

8. Mass is how much ________________ is in an object.

9. You can measure mass with a ________________.

Summarize the Main Idea

10. How can you tell about matter?

Describing Matter

Use the meaning clues to help you solve these crisscross puzzles. Use the words from the box.

ruler  mass  matter  properties

Across
1. how something looks, feels, smells, or tastes
4. the stuff all things are made of

Down
2. used to measure length
3. the amount of matter in something
Describing Matter

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

mass matter shape properties

Look around you. Everything you see is made up of ________________

_____________ . Every kind of matter has its own ________________ . This includes the

object’s color, size, and ________________ . Some properties of matter, such as an object’s length and

_____________ can be measured. A lighter object has less mass than a heavier one.
Solids

Use your book to help you fill in the blanks.

What is a solid?

1. A solid is a state of matter that has a _________________ of its own.

2. The amount of matter in a solid always stays the _________________.

What are the properties of solids?

3. Solids have many different _________________.

4. They can be large or _________________.

5. They come in many different _________________ and colors.
6. You can fold and bend some _________________.

7. Others are _________________.

8. How an object feels is its _________________.

9. A marble has a ________________ texture.

10. Sandpaper is _________________.

Summarize the Main Idea

II. What are some properties of solids?
# Solids

Describe the size, shape, or texture of each solid. Use the words in the box.

<table>
<thead>
<tr>
<th>round</th>
<th>large</th>
<th>soft</th>
<th>small</th>
</tr>
</thead>
<tbody>
<tr>
<td>rough</td>
<td>long</td>
<td>square</td>
<td>sharp</td>
</tr>
</tbody>
</table>

1. ![Image of solid 1]

2. ![Image of solid 2]

3. ![Image of solid 3]

4. ![Image of solid 4]
One kind of matter is made up of solids. Your pencil
_________________________
is a _______________________ . It has mass and takes
_________________________
up ______________________ . It will keep its
_________________________
_________________________ even when it is moved. Solids
come in different sizes, shapes, colors, and
_________________________
_________________________ .
Writing in Science

Write About It

Look at your shoes. What are the properties of your shoes? Draw and write about your shoes. What do your shoes tell about you?

Getting Ready


(Name the type of shoes.)

Who is the description about?

What is special about them?

Where do you wear them?

When do you wear them?

How do you feel when you wear them?
Drafting
The main idea is the most important idea. Write a main idea for your paragraph. Then write your paragraph.

Revising and Proofreading
Read the sentences below. Cross out each misspelled word. Write the correct word above it.

You can tell from my sneekers that I like to run.

There are air wholes that let my feet breath. 
Now look at your paragraph. Ask yourself:
• Did I describe my shoes?
• Did I tell what my shoes show about me?
Liquids

Use your book to help you fill in the blanks.

What is a liquid? ________________

1. A liquid is a state of ________________.

2. It has mass and takes up ________________ like solids.

3. Unlike a solid, a liquid ________________.

4. A liquid takes the ________________ of what it is in.

What are properties of different liquids?

5. Different ________________ can have different properties.
6. Some liquids ________________ slowly.

7. Liquids can also be different ________________.

8. Some liquids ________________ different, too.

**Summarize the Main Idea**

9. What are some properties of liquids?
Liquids

Read each sentence about liquids. Write YES if the sentence is true. Write NO if the sentence is not true.

1. A liquid is one kind of matter. YES

2. A liquid always takes up more space than a solid. YES

3. A liquid has mass. YES

4. A liquid always takes the shape of its container. YES

5. Only hot liquids will flow. NO

6. Some liquids are thicker than other liquids. YES

7. Liquids come in many different colors. YES

8. Liquids have different tastes. YES
Liquids

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

thicker properties liquids containers

Honey and milk are alike in some very important
                        ways. Both are _________________. Both flow, and
they always take the shape of their
                        _________________. Honey and milk have different
                        _________________, too. Honey flows more slowly
                        ________________, because it is _________________. Honey tastes
sweeter than milk.
Gases

Use your book to help you fill in the blanks.

What is a gas?

1. Gas is a kind of ________________.

2. Gas takes up ________________ like other matter, but it does not have its own shape.

3. Instead, it takes on the ________________ of what it is in.

4. You cannot see gas, but you can ________________ it.

5. Gas can give things a ________________.
Where are gases?

6. Gas spreads out ___________ until it can spread no more.

7. Gas can flow up, ___________, and all around.

8. The air we breathe is made up of different ____________.

Summarize the Main Idea

9. What are some properties of gases?

Gases

Tell what each picture shows about gases.

1. 

2. 

3. 

4. 

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Gases

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

bubbles  flow  shape  gas

Gases make up the third kind of matter. Although a

________________________

________________________ cannot be seen, you can feel it when it moves. Like a liquid, a gas takes the

________________________

________________________ of its container.

When you open the container, the gas will

________________________

________________________ out of it. It may flow up, like

________________________

the air __________________________ in a glass of soda water. It can also flow down or all around like air rushing out of a balloon.
Blimps

Read the Reading in Science pages in your book. Start with page 274. Look for a cause and its effect as you read. Remember, a cause is why an event happens. An effect is the event that happens. Fill in the diagram below. Tell what causes a blimp to float in the sky.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A blimp can float high in the sky.</td>
</tr>
</tbody>
</table>

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Write About It

Cause and Effect  How does the gas helium help a blimp stay up? Finish this explanation. Use the information in the Cause and Effect chart you made on page 129.

Blimps are filled with ____________________________.

Helium is ____________________________ . Because of this gas, the blimp ____________________________ .
Matter

Draw a line from the picture to the word that tells about the picture. Then write the words you matched.

1. [picture of a bear]  gas

2. [picture of a fluffy substance]  texture

3. [picture of a fire truck]  mass

4. [picture of a balance scale]  solid

1. ___________________________
2. ___________________________
3. ___________________________
4. ___________________________
Matter

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

Across
2. Stuff all things are made of
4. Air is this kind of matter
6. Way something feels
7. A block is this kind of matter.

Down
1. Amount of matter in something
3. How something looks, feels, smells, or tastes
5. Water is this kind of matter

Vocabulary
matter
texture
gas
liquid
mass
properties
solid
Tell how matter can change. Use the words in the box.

<table>
<thead>
<tr>
<th>gas</th>
<th>solid</th>
<th>liquid</th>
</tr>
</thead>
</table>

Heat a solid.

Heat a liquid.

Cool a liquid.
Popcorn Hop

Read the poem on page 288.

Write About It

Response to Literature

1. What happens when popcorn gets hot? How does it change? Use the poem to tell how you know.

2. What is another way heat can change things?

3. Do you think “Popcorn Hop” is a good title for the poem? Why or why not?
Heating Matter

Use your book to help you fill in the blanks.

How does heat change a solid?

1. Melting means to change from a solid to a ________________.

2. Heat can change some ________________, like chocolate, into a liquid.

3. All solids need heat to make them ________________.

4. Some solids, like metals, will melt only when they ________________ are heated to a very ________________ temperature.
How can heat change a liquid?

5. Heat can change a liquid to a _______________.

6. When water is heated, some water _______________, or goes into the air.

7. It takes a lot of heat for some liquids to _______________.

8. Boiling means to change from a liquid to a _______________.

Summarize the Main Idea

9. How does heat change a solid?
Heating Matter

Tell what each picture shows about heating matter. Use the words in the box.

<table>
<thead>
<tr>
<th>melting</th>
<th>boiling</th>
<th>solid</th>
<th>liquid</th>
<th>gas</th>
</tr>
</thead>
</table>

1. Heat causes ____________
   ____________
   ____________
   ____________
   ____________
   ____________

2. Heat causes ____________
   ____________
   ____________
   ____________
   ____________
   ____________

3. Heat causes ____________
   ____________
   ____________
   ____________
   ____________
   ____________
Have you ever tried to eat a juice pop on a hot day?
You have to eat fast or it will begin

boiling solids melting liquids

Heat will also change like butter or chocolate to

liquids. Heat can change to
gases. The bubbles in water tell you a gas is being formed. If all the water evaporates, the pot will be dry.
Cooling Matter

Use your book to help you fill in the blanks.

How does a liquid change to a solid?

1. Someone pours ___________________ water into an ice cube tray.

2. The tray is put in the ___________________.

3. The liquid changed to a ___________________.

4. The tray did not ___________________.

How can you cool matter?

5. When you ___________________ a liquid, it turns into a solid.
6. To make something freeze, you have to

_________ ____________

_________ ____________ it. ___________

7. Cooling means to take heat _____________.

8. When you freeze a liquid, it takes up more

_________ ____________

_________ ____________

Summarize the Main Idea

9. How can you cool matter?

____________________________________

____________________________________

____________________________________

____________________________________

____________________________________

____________________________________
Cooling Matter

Each picture shows what is happening to matter. Draw lines to match each picture with a sentence that tells about it.

1. A freezer cools matter by taking the heat away.

2. When the liquid juice freezes, it turns into a solid.

3. Juice is a liquid when it is poured into the tray.
Whenever you make ice cubes, you are changing _______________ the form of matter. Water is a _______________ when you put it in the ice cube tray. When you put _______________ this liquid in the freezer, you are _______________ it. When heat is taken away, the water _______________ _______________ into solid ice. This frozen liquid _______________ takes up more _______________ than liquid water. It also feels a lot colder!
Meet Rondi Davis

Read the Reading in Science pages in your book. Start with page 314. Look for the order in which things happen as you read. Remember, the order tells what happens first, next, and last. Fill in the diagram below. Tell what happens first, next, and last when diamonds are formed.

First

Next

Last

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Name ___________________________ Date ____________

Chapter 7 • Changing Solids, Liquids, and Gases
Reading and Writing in Science
Write About It

Put Things in Order. How do diamonds form? Put things in order to finish this explanation. Use the chart you made that tells the order in which things happen on page 143.

Diamonds are made of carbon. First,

Next,

Last,
Mixing Matter

Use your book to help you fill in the blanks.

What is a mixture?

1. When you put salt into water, you make a ____________________
   ____________________.

2. A mixture is two or more things put ____________________
   ____________________.

3. Sometimes when you mix things together, it is easy
   ____________________
   ____________________ to pick them ____________________ again.

4. You can see the different ____________________ of the mixture.
   ____________________

5. The things did not ____________________.
What mixtures cannot be changed?

6. Sometimes when you mix things, it is not easy to  
   get the objects .

7. Heat can a mixture into something else.

8. Some solids or completely mix into a liquid.

Summarize the Main Idea

9. What is a mixture?
Mixing Matter

Look at each mixture. Circle YES if you can separate the parts. Circle NO if some things in the mixture dissolve, and you cannot separate the parts.

1. YES
   NO

2. YES
   NO

3. YES
   NO
**Mixing Matter**

Fill in the blanks. Use words from the box.

| dissolves | cool | mixture | liquids |

Lemonade is fun to make. It is a ________________

________________________ of lemon juice, sugar, and ________________

water. Begin by mixing the ________________ together in a pitcher. Then add sugar and stir until ________________

it _________________. Put in some ice cubes to ________________

________________________ the mixture. Then pour and enjoy!
Writing in Science

Write About It

Write a story about the picture.
Tell where the bag has been.

Getting Ready

Write all the things you see in the backpack in the circles.
Drafting

Write a sentence to begin your story about where the backpack has been. Then write your story.

Revising and Proofreading

Fix the punctuation mistakes in the paragraph below.

After school, my mother took me to the park!
After playing for a while, I took out my water bottle?
Did I remember to bring it. Boy, was I thirsty.

Now look at your paragraph. Ask yourself.

• Did I tell where the backpack has been?
• Did I describe the things in the backpack?
Changing Matter

Circle the word that tells how matter is being changed.

1. melting  boiling  freezing
2. boiling  cooling  melting
3. mixing  melting  cooling
4. boiling  freezing  cooling

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Changing Matter

Write the word on each blank that goes with each meaning. Use the words in the box.

melting  boiling  cooling

1. To change from a liquid to a gas
   ____  ____  ____  ____  ____  ____  ____

2. To take heat away
   ____  ____  ____  ____  ____  ____  ____

3. To change from a solid to a liquid
   ____  ____  ____  ____  ____  ____  ____

The circled letters tell what you get when you freeze water.

____  ____  ____