

# SCIENCE

## LEVEL TWO

SECOND EDITION

### Table of Contents

\* *Click title for direct link to BLM.*

\* *To print viewed page, select Current page in print menu.*

\* *On BLM, click the TOC button to return to Table of Contents.*

BLM 1.1A Project: Plant Poster Description	BLM 2.8A Animal Mania	BLM 6.1A Project: Insulation Description
BLM 1.1B Project: Plant Poster	BLM 2.8B Chapter 2 Test	BLM 6.1B Project: Insulation
BLM 1.1C House	BLM 2.8C Vertebrate Skeleton	BLM 6.1C Thermometers
BLM 1.1D Plant Description	BLM 2.8D Vertebrate Facts	BLM 6.1D Molecules
BLM 1.2A Seed Chart	BLM 3.1A Project: Invertebrate Box Description	BLM 6.8A Chapter 6 Test
BLM 1.4A Stem Demonstration	BLM 3.1B Project: Invertebrate Box	BLM 6.8B Heat Facts
BLM 1.4B Stem Demonstration Observation	BLM 3.4A Ant Observation	BLM 7.1A Project: Shadow Theater Description
BLM 1.4C Leaves	BLM 3.5A Shells	BLM 7.1B Project: Shadow Theater
BLM 1.6A Recipe Card	BLM 3.5B Snail Spiral	BLM 7.2A Light Beam Box
BLM 1.7A Peanut Plant	BLM 3.6A Review: Invertebrate	BLM 7.7A Color Wheel
BLM 1.8A Planto	BLM 3.6B Chapter 3 Test	BLM 7.8A Chapter 7 Test
BLM 1.8B Chapter 1 Test	BLM 3.6C Invertebrate Facts	BLM 7.8B Light Facts
BLM 1.8C Plant Facts	BLM 4.1A Project: Animal Habitat Description	BLM 8.1A Project: Weather Poster Description
BLM 2.1A Project: Vertebrate Model Description	BLM 4.1B Project: Animal Habitat	BLM 8.1B Project: Weather Poster
BLM 2.1B Project: Vertebrate Model	BLM 4.3A Rain Forest Layers	BLM 8.1C Four Weather Factors
BLM 2.1C Unique Design of Animals	BLM 4.4A Food Chain	BLM 8.2A Thermometer
BLM 2.1D Classifying Birds and Fishes	BLM 4.5A Camouflage Graph	BLM 8.2B Temperatures
BLM 2.1E Fishes	BLM 4.5B Desert Animals	BLM 8.3A Evaporation and Condensation
BLM 2.2A Classifying Mammals, Reptiles, and Amphibians	BLM 4.8A Chapter 4 Test	BLM 8.6A Cloud Watching
BLM 2.2B Backbone	BLM 4.8B Habitat Facts	BLM 8.7A Weather Map
BLM 2.3A Mammals	BLM 5.1A Project: Classic Spool-Toy Description	BLM 8.8A Chapter 8 Test
BLM 2.4A Puzzle: Camel	BLM 5.1B Project: Classic Spool Toy	BLM 8.8B Weather Facts
BLM 2.5A Reptiles	BLM 5.1C Things That Produce Energy	BLM 9.1A Project: Ocean Report Description
BLM 2.6A Amphibians	BLM 5.4A Stored-Energy Demonstration	BLM 9.1B Project: Ocean Report
BLM 2.7A Birds	BLM 5.8A Chapter 5 Test	BLM 9.1C Project: Ocean Report World Map
		BLM 9.1D Ocean Color and Temperature

**Go to BLMs 9.4A–12.7B**

## Go to BLMs 1.1A–9.1D

BLM 9.4A Ocean Floor Model

BLM 9.5A Ocean Habitats

BLM 9.8A Ocean Trivia Clues

BLM 9.8B Ocean Trivia Answers

BLM 9.8C Chapter 9 Test

BLM 9.8D Ocean Facts

BLM 10.1A Project: Encyclopedia Article

Description

BLM 10.1B Project: Encyclopedia Article

BLM 10.1C Project: Diagram for Encyclopedia

Article

BLM 10.3A Animal Ears

BLM 10.4A Name Tags

BLM 10.5A Sign Language

BLM 10.7A Chapter 10 Test

BLM 10.7B Sound and Hearing Facts

BLM 11.1A Project: Health Booklet Description

BLM 11.1B Project: Health Booklet

BLM 11.1C Eye

BLM 11.2A Color Sorting

BLM 11.3A Blind Spot

BLM 11.8A Game Cards

BLM 11.8B Game Cards, continued

BLM 11.8C Game Cards, continued

BLM 11.8D Game Board

BLM 11.8E Chapter 11 Test

BLM 11.8F Sight and Touch Facts

BLM 12.1A Project: Taste and Smell Booklet

Description

BLM 12.1B Project: Taste and Smell Booklet

BLM 12.1C Taste Chart

BLM 12.4A Nose

BLM 12.6A Survey

BLM 12.6B Bar Graph

BLM 12.7A Chapter 12 Test

BLM 12.7B Taste and Smell Facts

## Project: Plant Poster Description

**BLM 1.1A**

### For the Teacher

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 1.1B Project: Plant Poster** and have students research a specific plant.
- This project can be done in class or as a homework assignment.
- Take students to the library or provide printed or electronic resources for them to use in class. They will also need a sheet of poster board, markers, scissors, glue, and tape.
- Plan to allow time for students to research and to present their project at a later date.
- Have students follow the directions and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send it home.

### Description of the Project

- Students choose a plant to research. You may provide a list from which they may choose.
- Students will need the following information and items: name of the plant, a picture of the plant, and a description of the habitat where the plant is normally found.
- After finding their information, students should arrange the following on a poster board: name of plant, picture of plant, a diagram or picture of the plant with the parts labeled (roots, stem, leaves, and possibly flowers, fruit, or cones), a description of the plant's location, and what a plant needs in order to grow. Students may use their books to remind them of the things a plant needs (sunlight, water, air, and food).
- Direct students to use the rubric and the directions on BLM 1.1B as a checklist and a guide. Each time a step is completed, they should check off the corresponding item.
- When finished, students should turn in BLM 1.1B and present their poster to the class.

Name: \_\_\_\_\_

## **Project: Plant Poster**

**BLM 1.1B**

### **Directions**

Choose a plant to research. Include the following:

- Name of your plant
- A picture of your plant
- Labels on the parts of your plant (roots, stem, leaves, and possibly flowers, fruit, or cones)
- Description of the place where your plant lives
- A list of things that a plant needs to grow

Arrange all of the above information neatly on a poster board. Then share it with the class.

Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I wrote the name of my plant on the poster board.	<input type="checkbox"/>
<input type="checkbox"/>	I placed a picture of my plant on the poster board.	<input type="checkbox"/>
<input type="checkbox"/>	I labeled the parts of my plant.	<input type="checkbox"/>
<input type="checkbox"/>	I described where my plant lives.	<input type="checkbox"/>
<input type="checkbox"/>	I listed the things a plant needs to grow.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

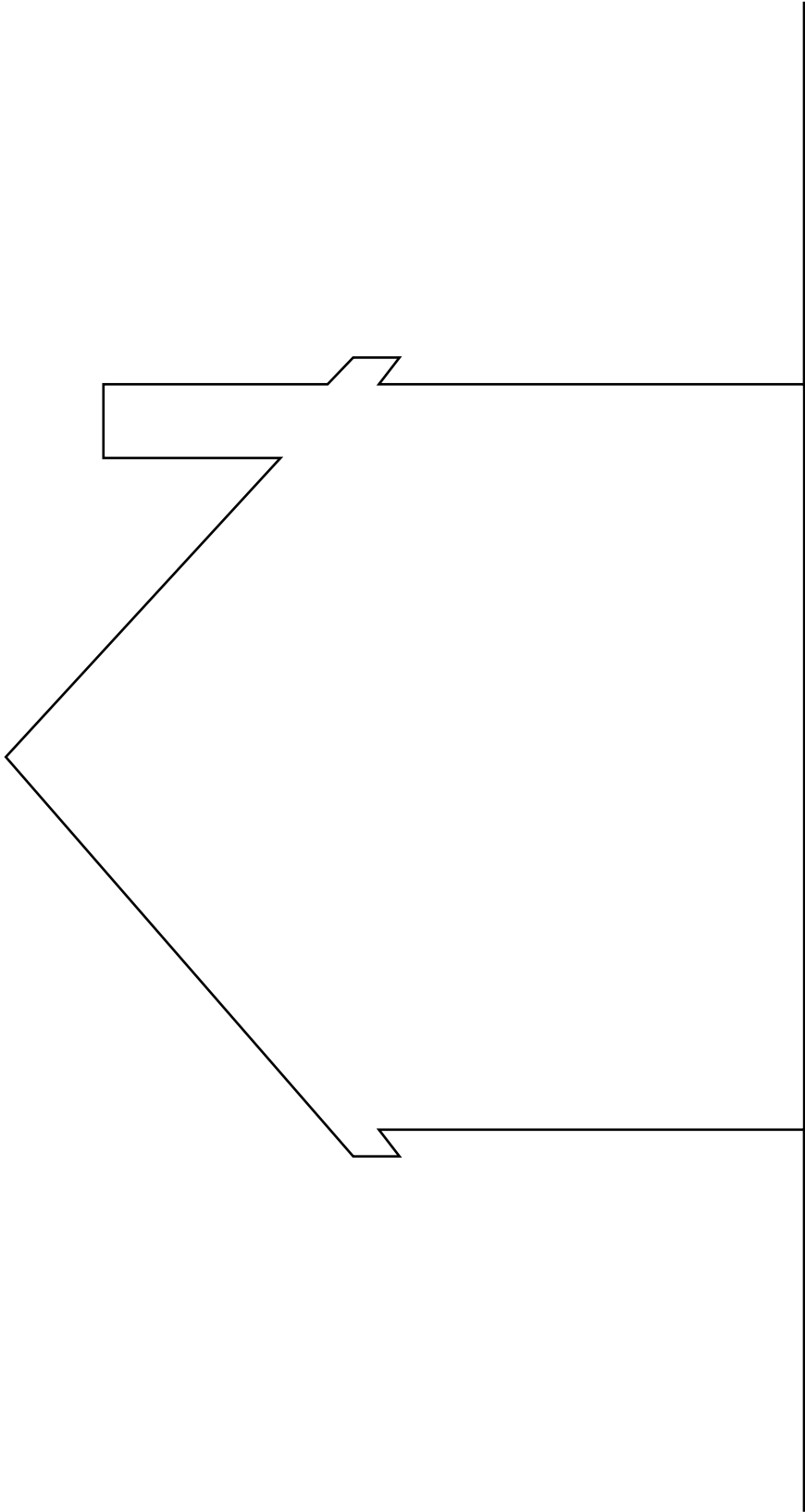
**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**



Name: \_\_\_\_\_

BLM 1.1C

*House*



Name: \_\_\_\_\_

### ***Plant Description***

**BLM 1.1D**

God made plants for \_\_\_\_\_.

My favorite plant is \_\_\_\_\_.

A plant I like to eat is \_\_\_\_\_.

A plant someone in my family likes to eat is \_\_\_\_\_.

A beautiful plant is \_\_\_\_\_.

A plant in my yard is \_\_\_\_\_.

Thank you, God, for plants because \_\_\_\_\_

\_\_\_\_\_.

Draw a picture of one of the plants you described.











Name: \_\_\_\_\_

## Seed Chart

## BLM 1.2A


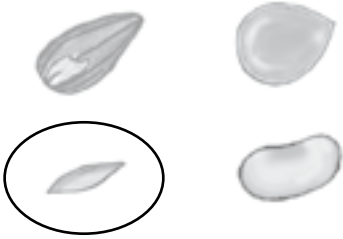





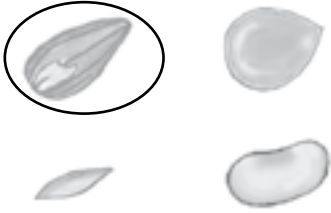
Observe the adult plant in the first column and the seeds in the second column. Circle the seed you think will grow to look like the plant in the picture. Then circle **yes** or **no** to tell if you guessed right.

adult plant	guess	correct guess
		yes / no
		yes / no
		yes / no
		yes / no

## Seed Chart

BLM 1.2A

Observe the adult plant in the first column and the seeds in the second column. Circle the seed you think will grow to look like the plant in the picture. Then circle **yes** or **no** to tell if you guessed right.

adult plant	guess	correct guess
		<p>Answers will vary.</p> <p>yes / no</p>
		<p>yes / no</p>
		<p>yes / no</p>
		<p>yes / no</p>

## ***Stem Demonstration***

## **BLM 1.4A**

Prepare a demonstration for students on how plants move water and nutrients (food) through their stems. Do one part of the demonstration the day before and the second part during class.

To complete both parts of the demonstration, you will need the following:

clear cup or glass	water
red food coloring	4 white carnations
scissors	paring knife

1. The day before, fill a clear cup or glass halfway with water. Drop a generous amount of red food coloring into the water until the water turns deep red.
2. Cut the end of 1 carnation stem at an angle and place it into the water.
3. Keep the carnation in the water overnight. Plan to use it and the other materials in class the next day.

During Lesson 1.4, use the other 3 carnations and materials to repeat the demonstration preparation for students. Then use the colorized stem to show what happened to the first carnation.

Name: \_\_\_\_\_

## ***Stem Demonstration Observation***

**BLM 1.4B**

Plants move water and food through their stems. After watching the stem demonstration in class, follow these directions.

1. Observe the stem that your teacher placed in colored water yesterday. Record the ways that the carnation changed.



**changes in carnation**

2. After your teacher cuts through the stem, tell why stems are like straws.

---

---

## ***Stem Demonstration Observation***

**BLM 1.4B**

Plants move water and food through their stems. After watching the stem demonstration in class, follow these directions.

1. Observe the stem that your teacher placed in colored water yesterday. Record the ways that the carnation changed.



**changes in carnation**

Answers will vary.

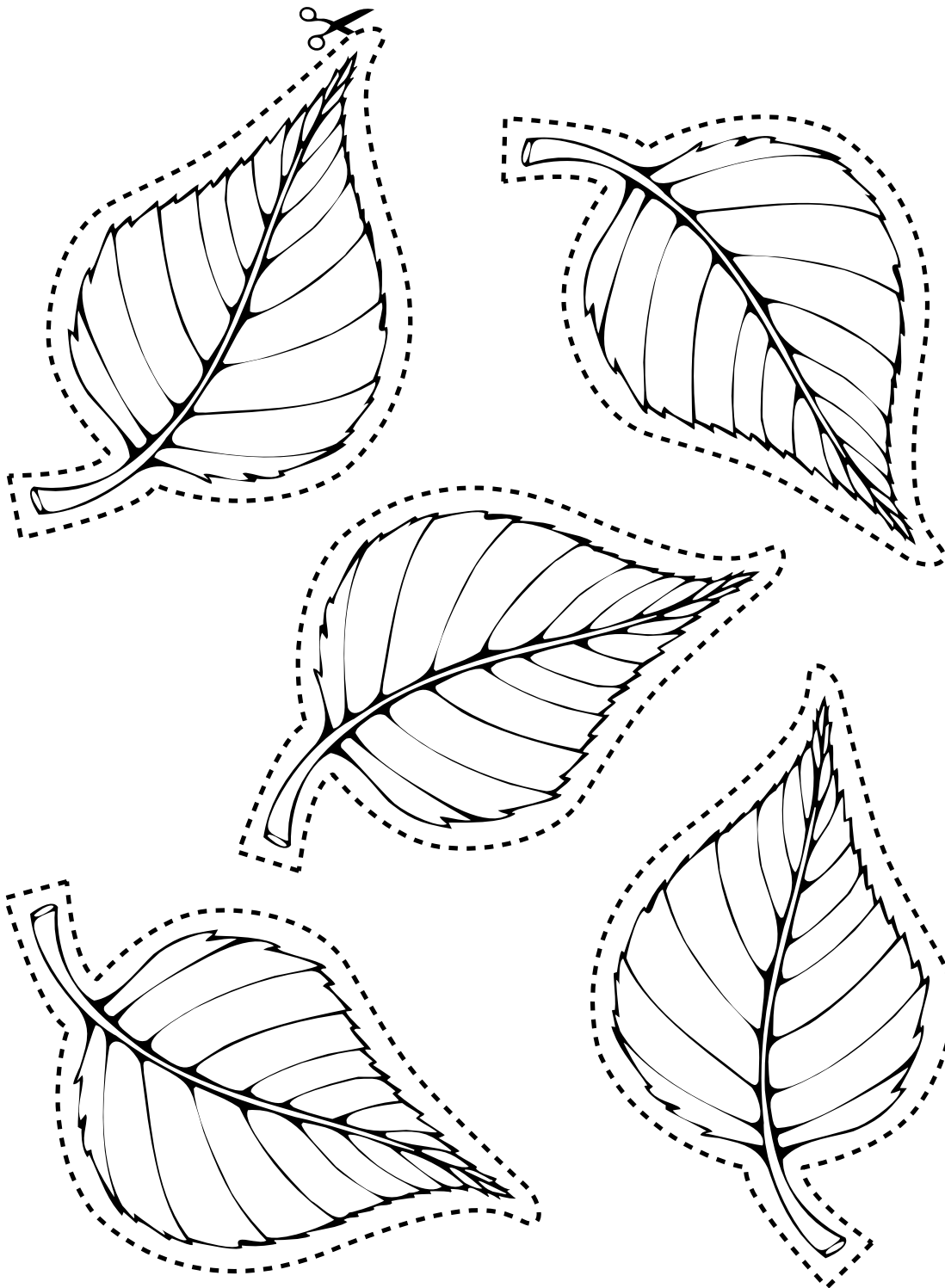
2. After your teacher cuts through the stem, tell why stems are like straws.

Answers will vary but should include that the stem is like a straw because it moves water up to the leaves or petals.

## ***Leaves***

**BLM 1.4C**

Color the leaves green. Cut them out to make a plant model.



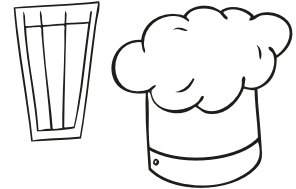
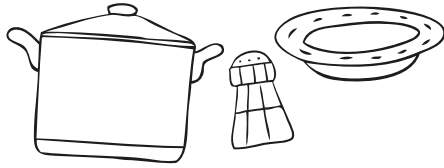


Name: \_\_\_\_\_

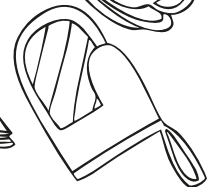
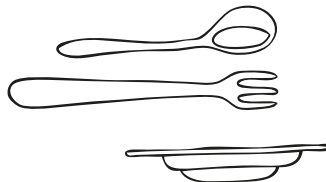
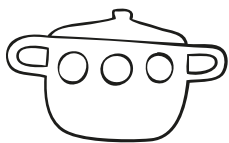
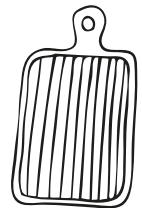
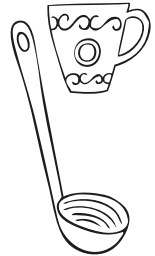
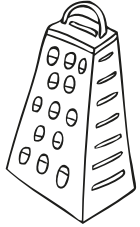
## Recipe Card

**BLM 1.6A**

Write the ingredients for your salad recipe in the space below. Make a creative name for your recipe.



Recipe Name



## Directions

1. Wash vegetables and fruit.
2. Cut into bite-size pieces.
3. Combine all ingredients in a bowl.
4. Top with salad dressing.
5. Enjoy!

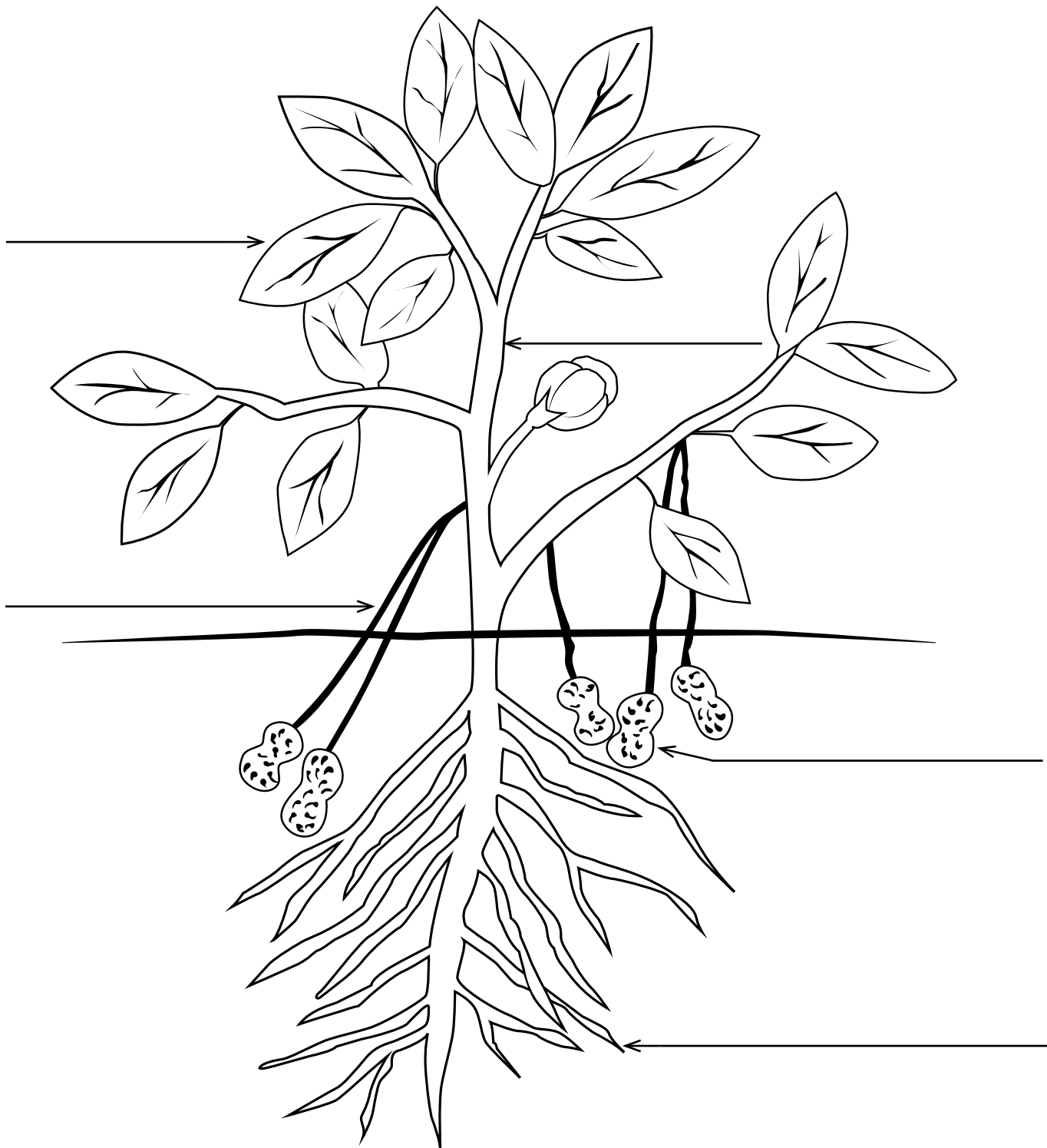
Name: \_\_\_\_\_

## ***Peanut Plant***

**BLM 1.7A**

Use the Word Bank to label the parts of a peanut plant.

<b>Word Bank</b>	root	stem	peg
	peanut	leaf	

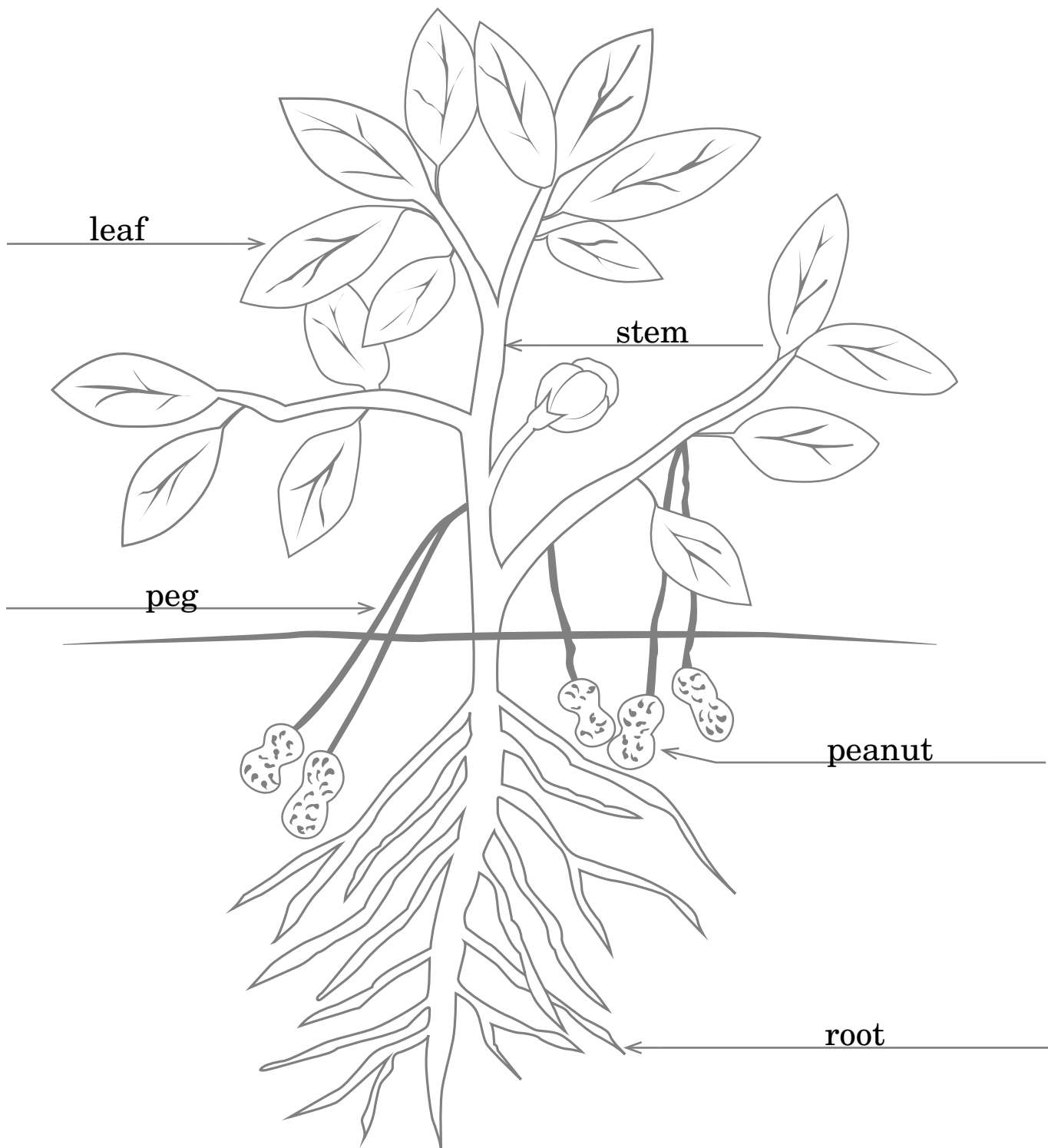


## Peanut Plant

BLM 1.7A

Use the Word Bank to label the parts of a peanut plant.

<b>Word Bank</b>	root	stem	peg
	peanut	leaf	



Name: \_\_\_\_\_

## ***Planto***

**BLM 1.8A**

Write one plant term in each box.

peanuts  
animals  
conifer  
carrot

photosynthesis  
flowering plant  
botanist  
pinecone

botany  
fruit  
wind  
seed

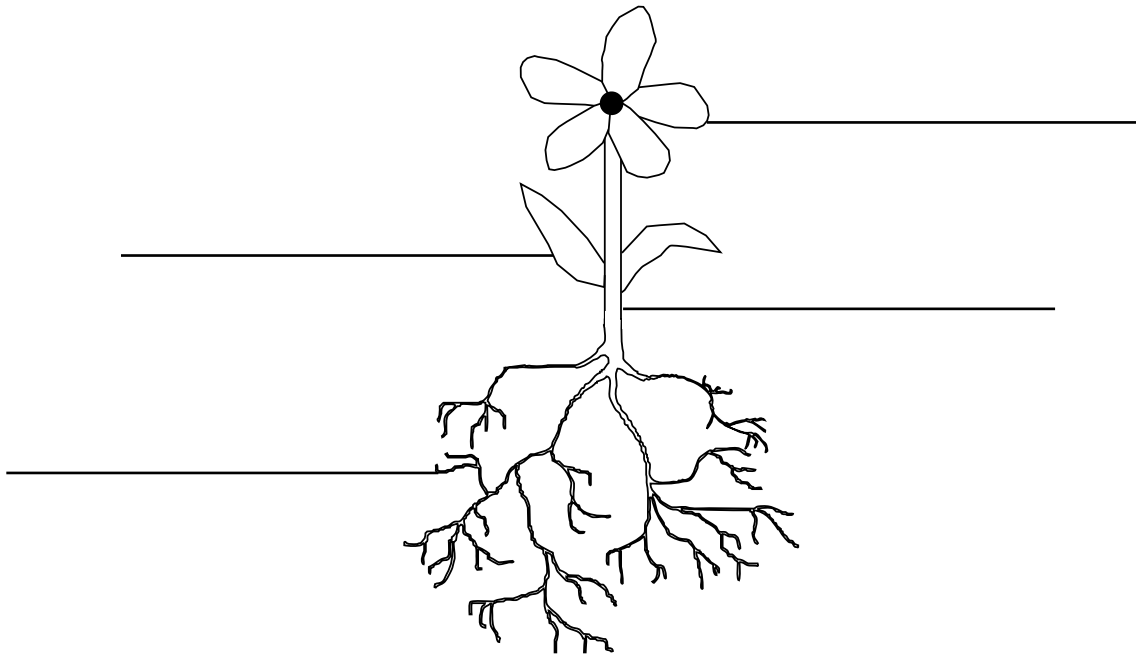
flower  
roots  
stem  
leaves


Name: \_\_\_\_\_

## Chapter 1 Test

BLM 1.8B

1. Write **stem**, **roots**, **leaf**, or **flower** to label the parts of the plant.



2. Draw lines to match the words on the left to the sentence that will make a true statement.

- |          |  |
|----------|--|
| botany • | • The study of plants is ____.                             |
| seeds •  | • Some plants grow ____ to hold their seeds.               |
| food •   | • Most plants begin their life cycle as ____.              |
| fruit •  | • Plants make ____ in their leaves through photosynthesis. |

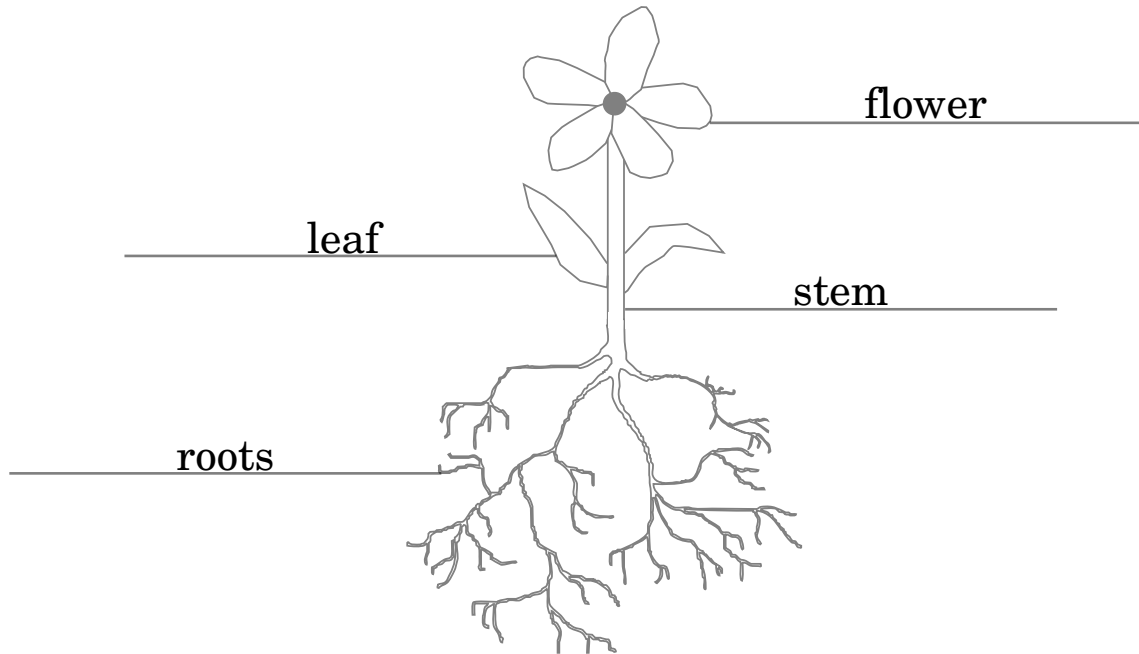
3. Fill in the circle to show what most plants need in order to grow.

- |                             |                                |                                |
|-----------------------------|--------------------------------|--------------------------------|
| <input type="radio"/> water | <input type="radio"/> sunlight | <input type="radio"/> gardener |
| <input type="radio"/> food  | <input type="radio"/> eggs     | <input type="radio"/> air      |

## Chapter 1 Test

## BLM 1.8B

1. Write **stem**, **roots**, **leaf**, or **flower** to label the parts of the plant.



2. Draw lines to match the words on the left to the sentence that will make a true statement.

botany — The study of plants is \_\_\_\_.

seeds — Some plants grow \_\_\_\_ to hold their seeds.

food — Most plants begin their life cycle as \_\_\_\_.

fruit — Plants make \_\_\_\_ in their leaves through photosynthesis.

3. Fill in the circle to show what most plants need in order to grow.

● water

● sunlight

○ gardener

● food

○ eggs

● air

Name: \_\_\_\_\_

## ***Plant Facts***

**BLM 1.8C**

Use the Word Bank to complete the sentences.



### ***Word Bank***

peanuts  
water

cones  
people

plants  
leaf

- 1.** Pine tree seeds are formed in \_\_\_\_\_.
- 2.** Stems move \_\_\_\_\_ and food  
through plants.
- 3.** Plants provide \_\_\_\_\_ and animals with food.
- 4.** Lettuce is a \_\_\_\_\_ that people can eat.
- 5.** George Washington Carver discovered many uses  
for \_\_\_\_\_.
- 6.** A botanist studies \_\_\_\_\_.

## Plant Facts

BLM 1.8C

Use the Word Bank to complete the sentences.



### Word Bank

peanuts  
water

cones  
people

plants  
leaf

1. Pine tree seeds are formed in cones.
2. Stems move water and food through plants.
3. Plants provide people and animals with food.
4. Lettuce is a leaf that people can eat.
5. George Washington Carver discovered many uses for peanuts.
6. A botanist studies plants.



### **For the Teacher**

- This project can be used at any time during the chapter as an additional activity or alternative assessment.
- Use **BLM 2.1B Project: Vertebrate Model** and have students research a specific vertebrate as background knowledge for a report and a model of the animal.
- This project can be done in class or as a homework assignment.
- Take students to the library or provide printed or electronic resources for them to use in class. They will also need materials such as clay, paper-towel tubes, paper rolls, yarn, chenille stems, glue, scissors, paper, and markers.
- Plan to allow students time for research and to present their project to their classmates at a later date.
- Have students follow the directions and have them use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess students' work and then send it home to the students' parents or guardians.

### **Description of the Project**

- Students should choose a vertebrate to research. Allow students to choose their own or provide a list from which they may choose.
- Students will need to include the following in their report: the vertebrate's name, class, reason for classification, unique characteristics of the classification, picture, and model.
- Direct students to use the rubric and directions found on BLM 2.1B to guide them in their work. Students can use this rubric as a checklist during the project. Each time a portion is completed, they should check off the corresponding item on the list. This procedure will help them keep track of their progress.
- When they are finished, students should turn in BLM 2.1B and present their project to the class. Then display the animal models in the classroom.

Name: \_\_\_\_\_

## **Project: Vertebrate Model**

**BLM 2.1B**

### **Directions**

Choose a vertebrate to research. Write a report and make a model. Include the following:

- Name of your animal
- Classification of your animal as bird, fish, mammal, reptile, or amphibian
- The reason your animal is in that class
- The unique characteristics of that class
- A picture, photograph, or drawing of the animal
- A model of your animal



Write the above information on notebook paper in complete sentences. Attach the picture of your animal to the paper. Display the model of your animal when you present your paper to the class.

Use the checklist for your project. When you have checked all the boxes in the first column, you are finished.

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I wrote the name and class of my animal on my paper.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote a sentence about why my animal belongs in that class.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote about the unique characteristics of that class.	<input type="checkbox"/>
<input type="checkbox"/>	I placed a picture, a photograph, or a drawing of the animal on my paper.	<input type="checkbox"/>
<input type="checkbox"/>	I made a model of my animal.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work

**Teacher Comments:**

Name: \_\_\_\_\_

## ***Unique Design of Animals***

**BLM 2.1C**

Match the animals to a clue about their unique design.



•

- This animal has the perfect beak for getting its food. It drinks from flowers.



•

- This animal has sticky toe pads so it can climb trees.



•

- This animal uses its horn to protect itself from danger.



•

- This animal's hard backbone covers the animal and protects it from danger.



•

- This animal tricks its enemies. It has an eyespot near its tail. Its enemies do not know if it is coming or going.

## Unique Design of Animals

## BLM 2.1C

Match the animals to a clue about their unique design.



This animal has the perfect beak for getting its food. It drinks from flowers.

This animal has sticky toe pads so it can climb trees.

This animal uses its horn to protect itself from danger.

This animal's hard backbone covers the animal and protects it from danger.

This animal tricks its enemies. It has an eyespot near its tail. Its enemies do not know if it is coming or going.

Name: \_\_\_\_\_

## ***Classifying Birds and Fishes***

**BLM 2.1D**

<p>Birds are warm-blooded vertebrates with feathers, wings, and two feet. They have beaks instead of teeth.</p>	
<p>Fishes are cold-blooded vertebrates that use gills to breathe. Most are covered with scales and have fins to swim.</p>	

Birds are warm-blooded vertebrates with feathers, wings, and two feet. They have beaks instead of teeth.	
owl	robin
Fishes are cold-blooded vertebrates that use gills to breathe. Most are covered with scales and have fins to swim.	
angel fish	sea horse

Name: \_\_\_\_\_

## ***Fishes***

**BLM 2.1E**

Circle the characteristics of fish.

- have gills to breathe
- have fur
- are cold-blooded
- have backbones
- have dry, scaly skin
- have fins
- are warm-blooded
- hatch from eggs
- produce milk

Draw a picture of a fish.



## ***Fishes***

**BLM 2.1E**

Circle the characteristics of fish.

• have gills to breathe

• have fins

• have fur

• are warm-blooded

• are cold-blooded

• hatch from eggs

• have backbones

• produce milk

• have dry, scaly skin

Draw a picture of a fish.

Drawings will vary.



Name: \_\_\_\_\_

## ***Classifying Mammals, Reptiles, and Amphibians***

**BLM 2.2A**

Mammals are warm-blooded vertebrates that have hair or fur. They make milk for their babies. They have lungs and breathe air.	
Reptiles are cold-blooded vertebrates that have dry, scaly skin. They have lungs to breathe.	
Amphibians are cold-blooded vertebrates that have smooth, moist skin. Their bodies change form as they grow.	

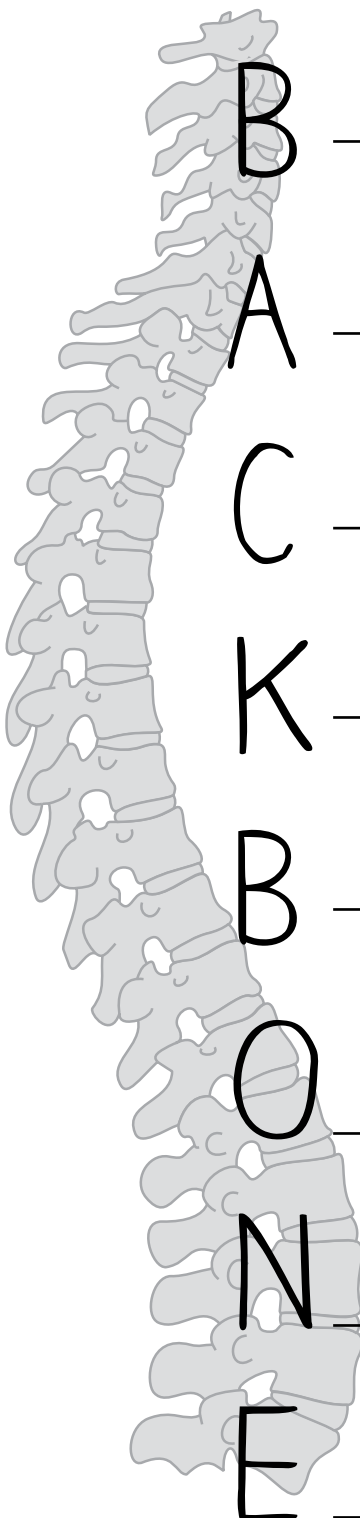
Mammals are warm-blooded vertebrates that have hair or fur. They make milk for their babies. They have lungs and breathe air.		
elephant	bat	whale
Reptiles are cold-blooded vertebrates that have dry, scaly skin. They have lungs to breathe.		
snake	turtle	chameleon
Amphibians are cold-blooded vertebrates that have smooth, moist skin. Their bodies change form as they grow.		
salamander	frog	

Name: \_\_\_\_\_

## ***Backbone***

**BLM 2.2B**

Write the name of a vertebrate on each line. The name must begin with the given letter.



B \_\_\_\_\_

A \_\_\_\_\_

C \_\_\_\_\_

K \_\_\_\_\_

B \_\_\_\_\_

O \_\_\_\_\_

N \_\_\_\_\_

E \_\_\_\_\_

The five main classes of vertebrates are birds, fishes, mammals, reptiles, and amphibians.

## Backbone

## BLM 2.2B

Write the name of a vertebrate on each line. The name must begin with the given letter.

Possible answers:

B

bear, bat \_\_\_\_\_

A

alligator, aardvark \_\_\_\_\_

C

cat, crane \_\_\_\_\_

K

kangaroo, koala \_\_\_\_\_

B

bison, beaver \_\_\_\_\_

O

otter, ostrich \_\_\_\_\_

N

narwhal, nightingale \_\_\_\_\_

E

emu, elephant \_\_\_\_\_

The five main classes of vertebrates are birds, fishes, mammals, reptiles, and amphibians.

Name: \_\_\_\_\_

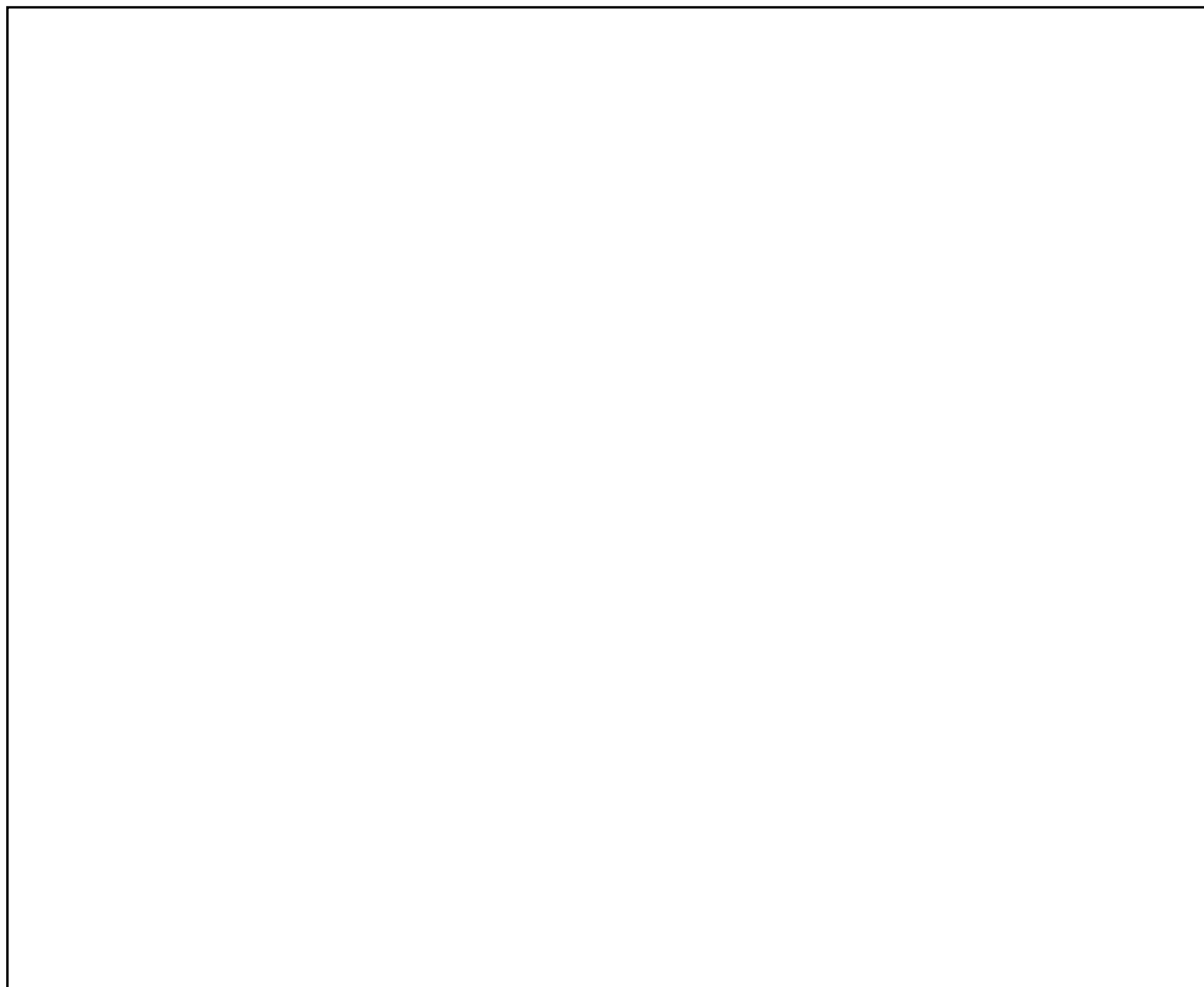
## ***Mammals***

## **BLM 2.3A**

Circle the characteristics of mammals.

- have lungs to breathe air
- have hair or fur
- produce milk
- are cold-blooded
- hatch from eggs
- have gills
- have dry, scaly skin
- are warm-blooded
- have backbones

Draw a picture of a mammal.



## ***Mammals***

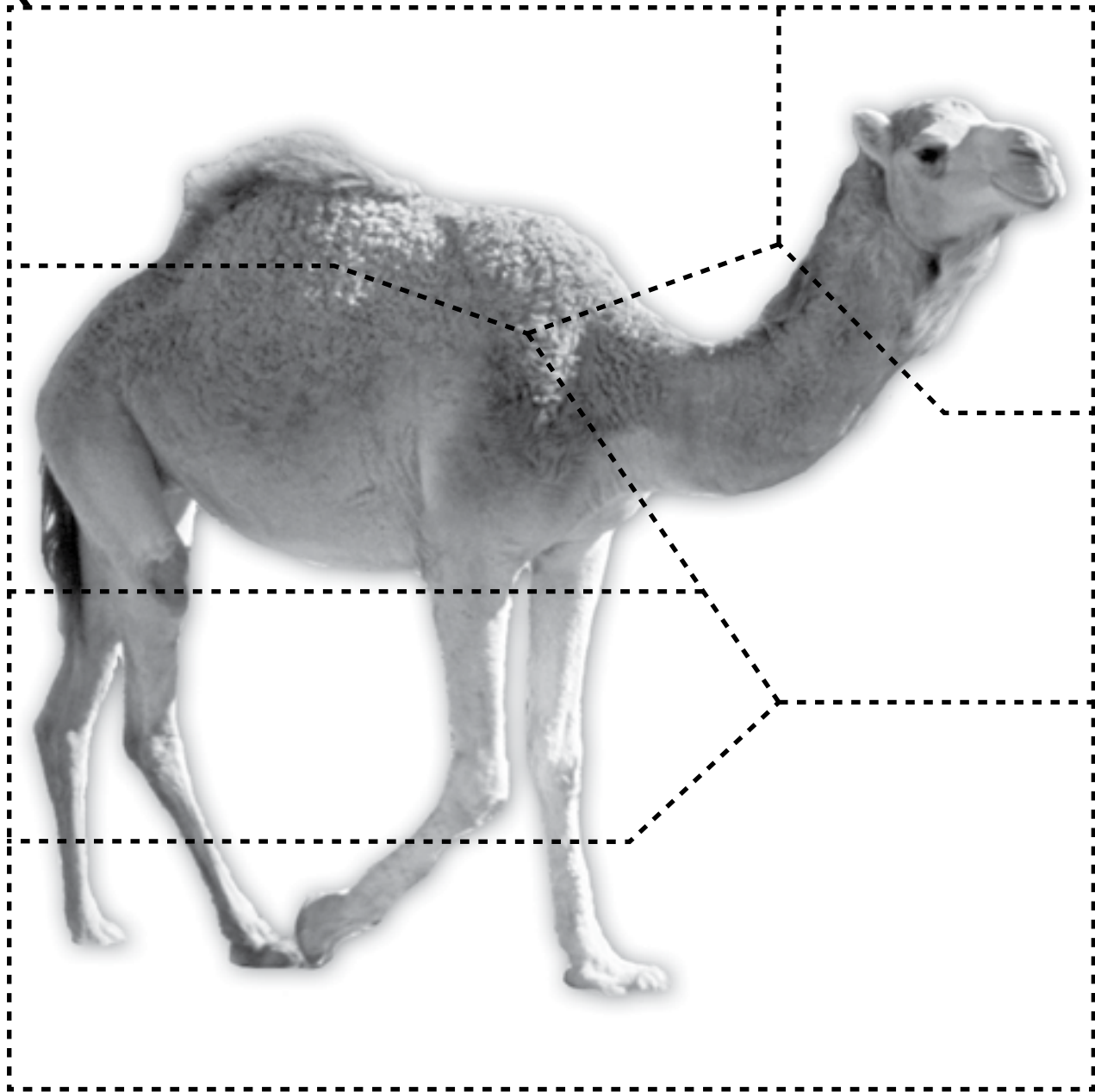
## **BLM 2.3A**

Circle the characteristics of mammals.

- have lungs to breathe air
- have hair or fur
- produce milk
- are cold-blooded
- hatch from eggs
- have gills
- have dry, scaly skin
- are warm-blooded
- have backbones

Draw a picture of a mammal.

Drawings will vary.



Name: \_\_\_\_\_

## ***Reptiles***

**BLM 2.5A**

Circle the characteristics of reptiles.

- are cold-blooded
- are warm-blooded
- breathe with lungs
- lay eggs
- have fur
- have gills
- have dry, scaly skin
- have backbones
- produce milk

Draw a picture of a reptile.





## ***Reptiles***

**BLM 2.5A**

Circle the characteristics of reptiles.

- are cold-blooded
- are warm-blooded
- breathe with lungs
- lay eggs
- have fur
- have gills
- have dry, scaly skin
- have backbones
- produce milk

Draw a picture of a reptile.

Drawings will vary.

Name: \_\_\_\_\_

## ***Amphibians***

## **BLM 2.6A**

Circle the characteristics of amphibians.

- have rough, scaly skin
- go through metamorphosis
- breathe with gills when young
- have hair or fur
- are cold-blooded
- lay eggs in or around water
- have backbones
- have smooth, moist skin
- produce milk

Draw two pictures of an amphibian. Draw one picture of the young animal. Then draw what it looks like as an adult.



## ***Amphibians***

**BLM 2.6A**

Circle the characteristics of amphibians.

- have rough, scaly skin
- go through metamorphosis
- breathe with gills when young
- have hair or fur
- are cold-blooded
- lay eggs in or around water
- have backbones
- have smooth, moist skin
- produce milk

Draw two pictures of an amphibian. Draw one picture of the young animal. Then draw what it looks like as an adult.

Drawings will vary.

Name: \_\_\_\_\_

## ***Birds***

**BLM 2.7A**

Circle the characteristics of birds.

- have backbones
- have moist skin
- use a beak instead of teeth
- have gills
- have two feet
- produce milk
- are warm-blooded
- lay eggs
- have feathers

Draw a picture of a bird.



## ***Birds***

**BLM 2.7A**

Circle the characteristics of birds.

- have backbones
- have moist skin
- use a beak instead of teeth
- have gills
- have two feet
- produce milk
- are warm-blooded
- lay eggs
- have feathers

Draw a picture of a bird.

Drawings will vary.



cat	snake	toad	hawk
bald eagle	bass	dog	trout
zebra	alligator	bat	sparrow
camel	blue jay	lizard	shark
parrot	salamander	salmon	lion
skunk	tree frog	crocodile	newt

<b>birds</b>	<b>fishes</b>	<b>mammals</b>	<b>reptiles</b>	<b>amphibians</b>
bald eagle	trout	cat	snake	toad
parrot	bass	zebra	alligator	newt
blue jay	salmon	camel	lizard	salamander
hawk	shark	skunk	crocodile	tree frog
sparrow		dog		
		bat		
		lion		

Name: \_\_\_\_\_

## Chapter 2 Test

BLM 2.8B

Complete the sentence.

1. All vertebrates have a \_\_\_\_\_.

Circle the animals that belong in each class.

2. Mammals

whale      eagle      tiger      bat      shark

3. Reptiles

snake      lizard      crocodile      hawk      cat

4. Birds

trout      crow      rabbit      robin      blue jay

5. Amphibians

toad      sea lion      salamander      tree frog      crocodile

6. Fishes

cardinal      lion      salmon      bass      trout

---

---

Draw curved arrows to show the life cycle of a salamander.





## Chapter 2 Test

BLM 2.8B

Complete the sentence.

1. All vertebrates have a Possible answers: backbone, skeleton

Circle the animals that belong in each class.

2. Mammals

whale eagle tiger bat shark

3. Reptiles

snake lizard crocodile hawk cat

4. Birds

trout crow rabbit robin blue jay

5. Amphibians

toad sea lion salamander tree frog crocodile

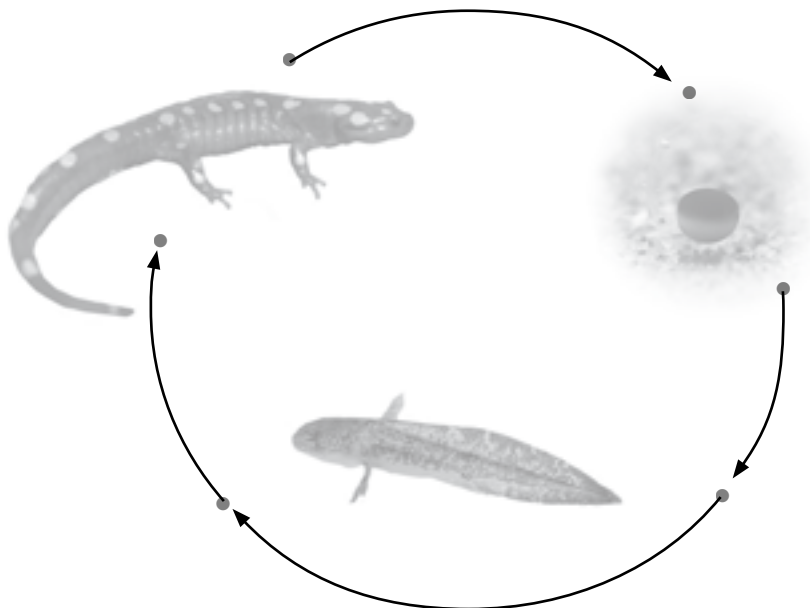
6. Fishes

cardinal lion salmon bass trout

---

---

Draw curved arrows to show the life cycle of a salamander.



Name: \_\_\_\_\_

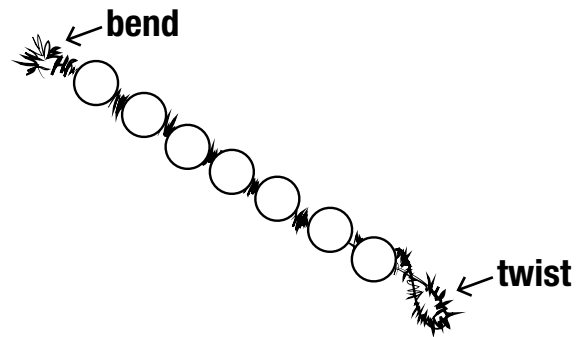
## ***Vertebrate Skeleton***

**BLM 2.8C**

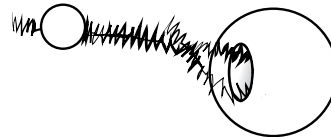
### **Directions and Materials**

Use the materials your teacher gives you to make a vertebrate skeleton model. Follow these directions.

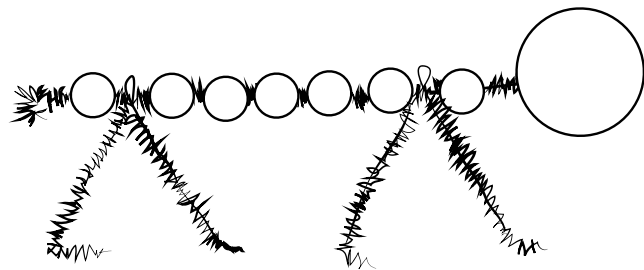
1. Bend down just a little of the end of a chenille stem. Thread seven small plastic beads onto the stem. These beads represent the vertebrae on the animal's backbone. Twist the other end closed.



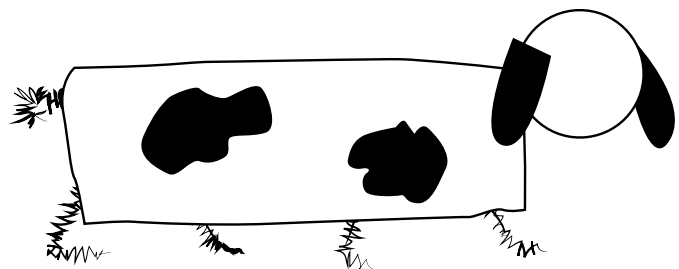
2. Place the wooden bead over the twisted end. Glue in place and allow the glue to dry. This bead represents the animal's skull.



3. Add legs by cutting two chenille stems in half and bending them to form leg bones. Twist the bones around the spine.



4. The skeleton is complete. To make different classes of animals, add felt to make a mammal or feathers to make a bird.



Name: \_\_\_\_\_

## ***Vertebrate Facts***

**BLM 2.8D**

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	observe	reptile	body	unique
	classify	frog	bird	vertebrate

1. You can \_\_\_\_\_ animals by sorting them into groups.
2. The \_\_\_\_\_ temperature of a cold-blooded animal changes with the outside temperature.
3. A \_\_\_\_\_ changes its form as it grows older.
4. An iguana is one type of \_\_\_\_\_.
5. An animal that is \_\_\_\_\_ is one of a kind.
6. When you \_\_\_\_\_ birds, you watch them carefully with attention to detail.
7. A \_\_\_\_\_ is warm-blooded and has feathers.
8. A \_\_\_\_\_ is an animal that has a backbone.

## Vertebrate Facts

BLM 2.8D

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	observe	reptile	body	unique
	classify	frog	bird	vertebrate

1. You can \_\_\_\_\_ **classify** \_\_\_\_\_ animals by sorting them into groups.
2. The \_\_\_\_\_ **body** \_\_\_\_\_ temperature of a cold-blooded animal changes with the outside temperature.
3. A \_\_\_\_\_ **frog** \_\_\_\_\_ changes its form as it grows older.
4. An iguana is one type of \_\_\_\_\_ **reptile** \_\_\_\_\_.
5. An animal that is \_\_\_\_\_ **unique** \_\_\_\_\_ is one of a kind.
6. When you \_\_\_\_\_ **observe** \_\_\_\_\_ birds, you watch them carefully with attention to detail.
7. A \_\_\_\_\_ **bird** \_\_\_\_\_ is warm-blooded and has feathers.
8. A \_\_\_\_\_ **vertebrate** \_\_\_\_\_ is an animal that has a backbone.

## ***Project: Invertebrate Box Description***

## **BLM 3.1A**

### **For the Teacher**

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 3.1B Project: Invertebrate Box** to have students research a specific invertebrate of their choice.
- This project can be completed in class or as a homework assignment.
- Take students to the library or provide printed or electronic resources for them to use in class. They will also need lidded boxes, construction paper, scissors, glue, tape, markers, glitter, and magazines.
- Plan to allow time for students to research and to present their project at the end of the chapter.
- Have students follow the directions and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send the rubric home.

### **Description of the Project**

- Have students choose an invertebrate to research. You may provide a list from which they may choose. Students will need to collect the following information and items: name of the animal, a picture of the animal, a brief description of the animal, where the animal lives, what the animal eats, and any predators it may have.
- After finding their information, students should arrange it on the outside of a box. You may have them bring from home a shoe box or any other box with a lid, as long as the sides are large enough to hold the required information. Have students place one piece of information on each side. For example, they should glue the picture on one side, write the name of the animal on a piece of paper and glue it to the other side, and so on. Encourage students to be creative as they design their box.
- Direct students to use the rubric and directions found on BLM 3.1B to guide them in their work. They should use this rubric as a checklist during their project work. Each time a step is completed, they should check off the corresponding item.
- When they are finished, students should turn in BLM 3.1B and present their boxes to the class.

Name: \_\_\_\_\_

## Project: Invertebrate Box

BLM 3.1B

### Directions

Choose an invertebrate to research. Decorate a lidded box with these:

- Name of your invertebrate
- A picture of your invertebrate
- A brief description of your invertebrate
- Where your invertebrate lives
- What your invertebrate eats
- What eats your invertebrate (predators)



Arrange the above information neatly on the outside of a lidded box. Use art supplies and magazines to make your project creative. Put one of the items listed above on each side of the box.

Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

student		teacher
<input type="checkbox"/>	<b>Side 1:</b> I wrote the name of my invertebrate.	<input type="checkbox"/>
<input type="checkbox"/>	<b>Side 2:</b> I included a picture of my invertebrate.	<input type="checkbox"/>
<input type="checkbox"/>	<b>Side 3:</b> I wrote a brief description of my invertebrate.	<input type="checkbox"/>
<input type="checkbox"/>	<b>Side 4:</b> I described or pictured the area(s) where my invertebrate lives.	<input type="checkbox"/>
<input type="checkbox"/>	<b>Bottom of box:</b> I listed or pictured the things my invertebrate eats.	<input type="checkbox"/>
<input type="checkbox"/>	<b>Top of box:</b> I listed or pictured the animals that eat my invertebrate.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent 3 Well done 2 Good 1 Needs work

**Teacher Comments:**

### ***Ant Observation***

## BLM 3.4A



**Name:** \_\_\_\_\_

**Name:** \_\_\_\_\_

# ANTS



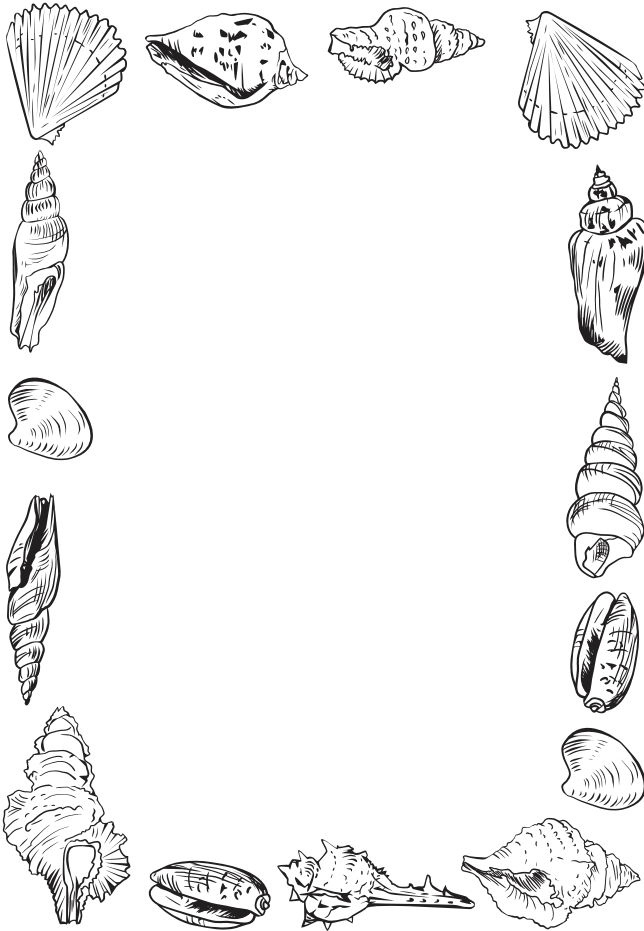
# ANTS





Name: \_\_\_\_\_

Draw your shell in the space below. On the lines, tell about your shell's color, shape, or size.




---

---

---

---

---

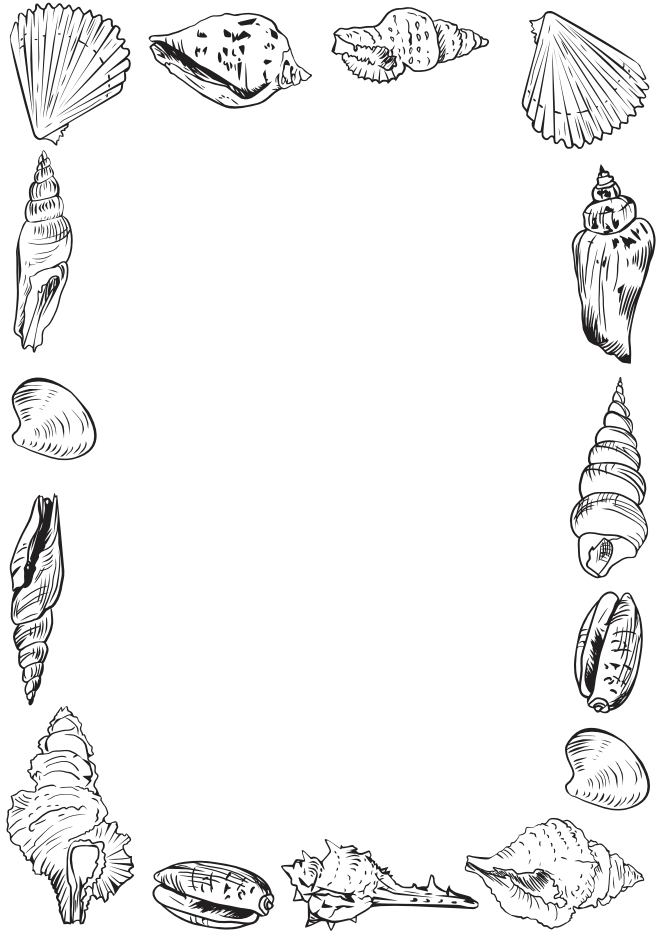
---

---

---

Name: \_\_\_\_\_

Draw your shell in the space below. On the lines, tell about your shell's color, shape, or size.




---

---

---

---

---

---

---

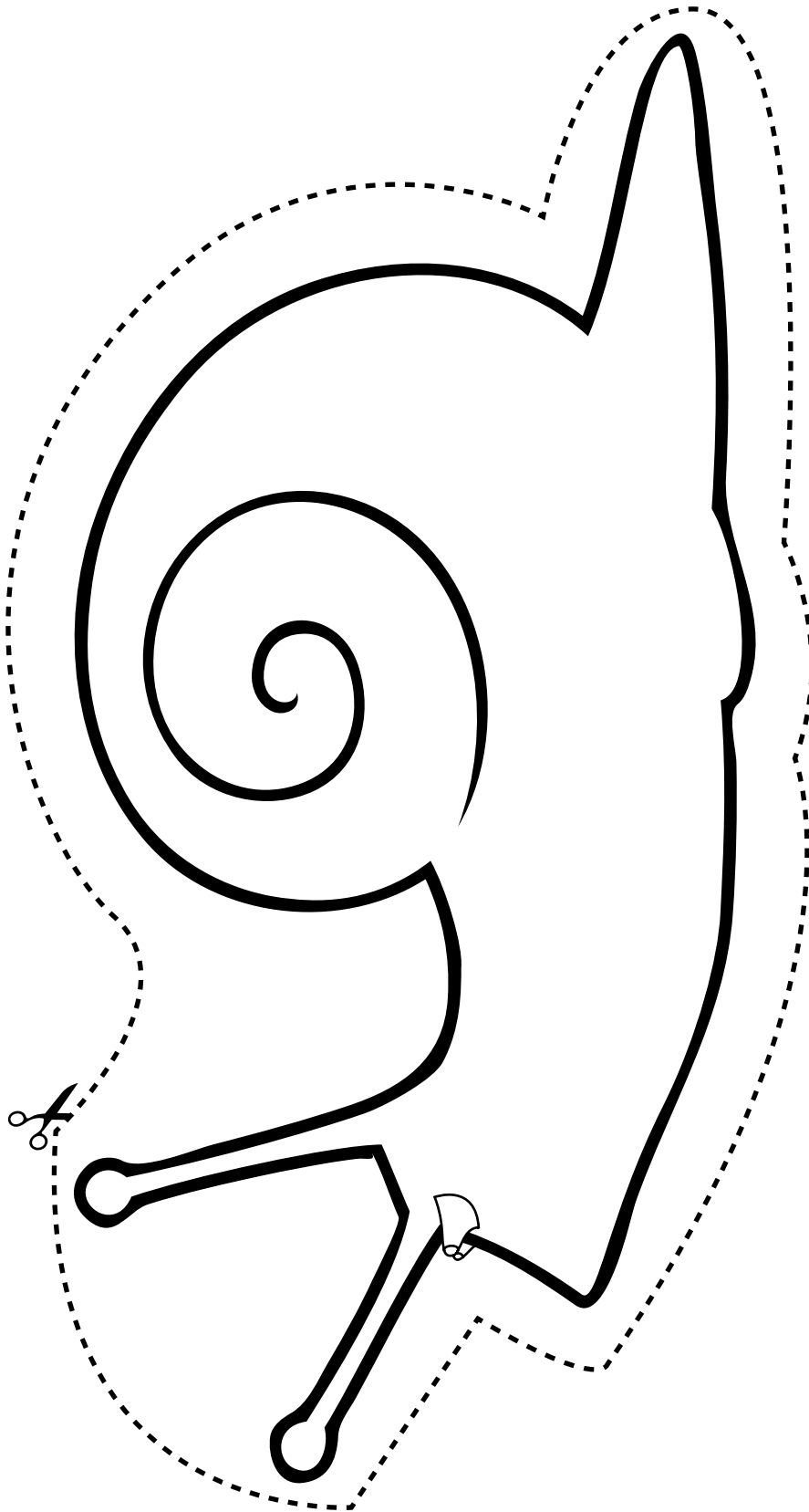
---



## ***Snail Spiral***

**BLM 3.5B**

On the snail shell, write a sentence about a snail. Use some of the words listed below the snail. Color the snail and cut it out.



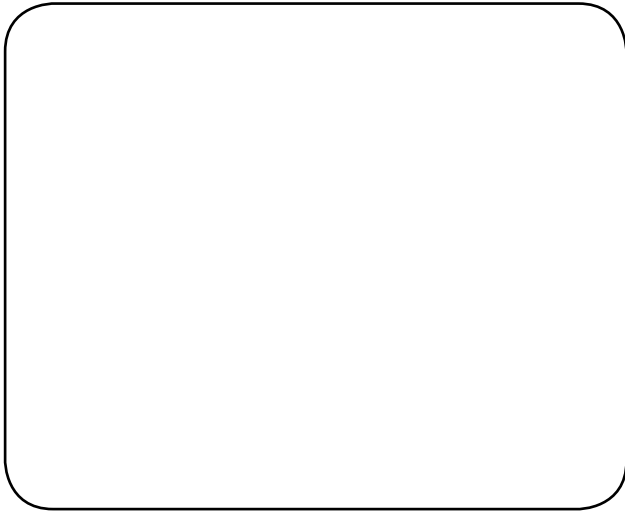
invertebrate, soft body, spiral shell, tentacles, no backbone, mucus

Name: \_\_\_\_\_

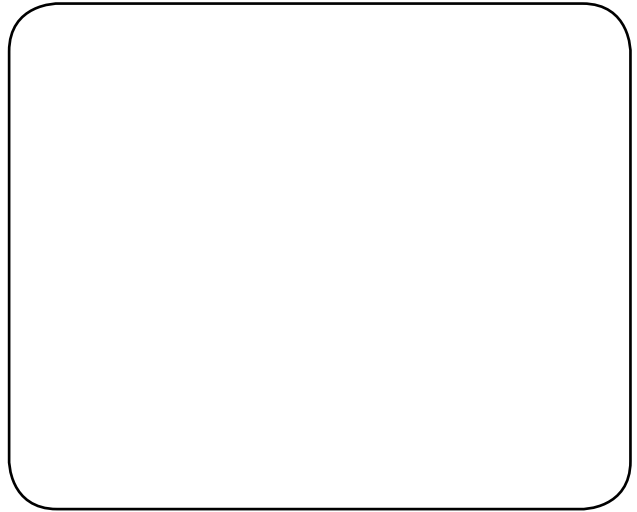
**Review: Invertebrate**

**BLM 3.6A**

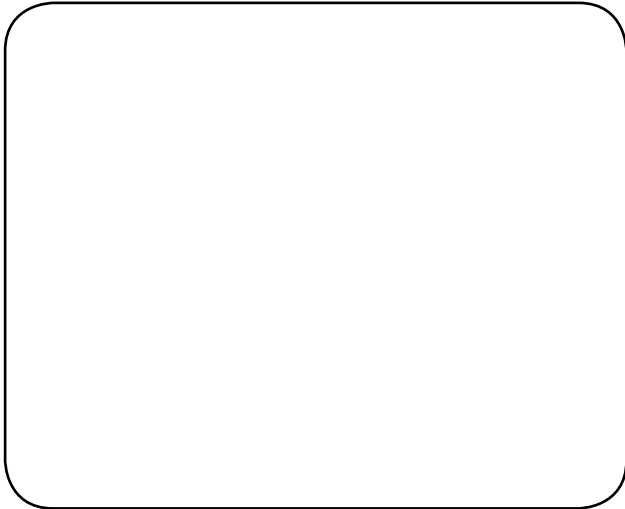
Draw an invertebrate in each box. Show the correct number of body sections for the ant, the spider, the butterfly, and the earthworm.



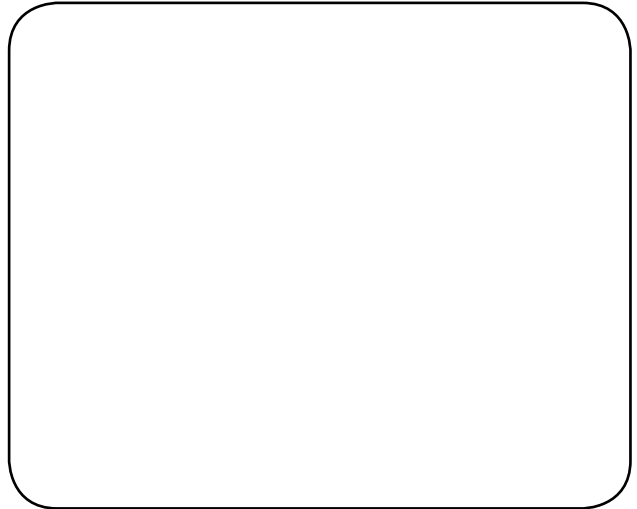
**ant**



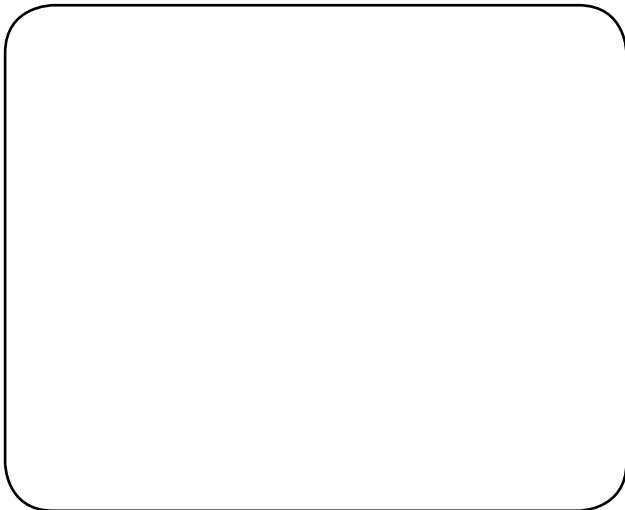
**butterfly**



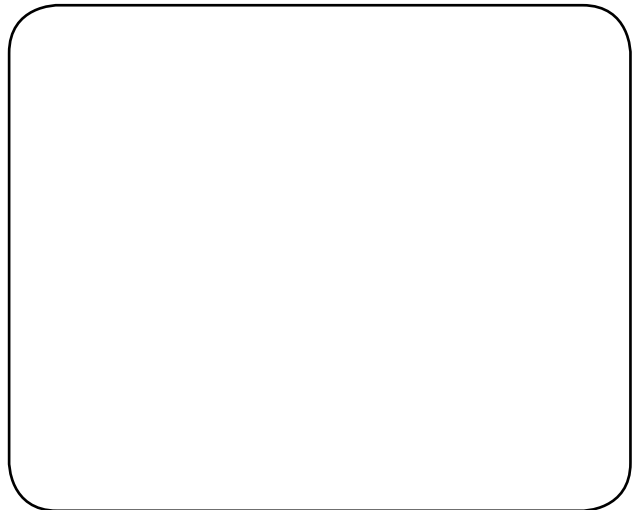
**spider**



**earthworm**



**snail**



**octopus**

## ***Review: Invertebrate***

## **BLM 3.6A**

Draw an invertebrate in each box. Show the correct number of body sections for the ant, the spider, the butterfly, and the earthworm.

**Drawings will vary.**

three body sections

**ant**

three body sections

**butterfly**

two body sections

**spider**

one body section

**earthworm**

should show a spiral shell

**snail**

should show some similarity  
to the octopus image on  
the Student Edition page  
in Lesson 3.1

**octopus**

Name: \_\_\_\_\_

## Chapter 3 Test

BLM 3.6B

Circle the animals that are invertebrates.



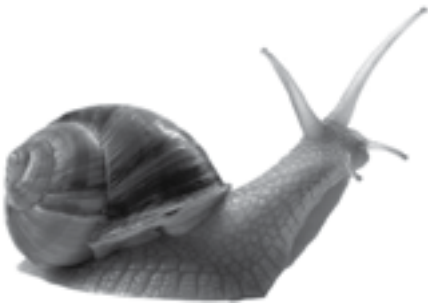
elephant



earthworm



camel



snail



cat



spider

Fill in the circle next to the correct answer.

1. Spiders have \_\_\_\_ legs.  
☐ 6                      ☐ 8                      ☐ 10
2. Ants are insects. Insects have \_\_\_\_ body sections.  
☐ 1                      ☐ 2                      ☐ 3
3. Snails are invertebrates with a \_\_\_\_ .  
☐ shell                      ☐ backbone
4. Ants live in large groups called \_\_\_\_ .  
☐ houses                      ☐ cities                      ☐ colonies
5. Earthworms \_\_\_\_ to stay safe.  
☐ plant                      ☐ jump                      ☐ burrow

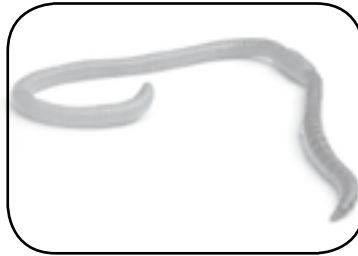
## Chapter 3 Test

BLM 3.6B

Circle the animals that are invertebrates.



elephant



earthworm



camel



snail



cat



spider

Fill in the circle next to the correct answer.

1. Spiders have \_\_\_\_ legs.

☐ 6

☒ 8

☐ 10

2. Ants are insects. Insects have \_\_\_\_ body sections.

☐ 1

☐ 2

☒ 3

3. Snails are invertebrates with a \_\_\_\_ .

☒ shell

☐ backbone

4. Ants live in large groups called \_\_\_\_.

☐ houses

☐ cities

☒ colonies

5. Earthworms \_\_\_\_ to stay safe.

☐ plant

☐ jump

☒ burrow

Name: \_\_\_\_\_

## ***Invertebrate Facts***

**BLM 3.6C**

Use the Word Bank to complete the sentences. The first letter of each answer is done for you.

<b>Word Bank</b>	tentacles	wise	insects	backbone
	invertebrate	mucus	abdomen	hypothesis

1. Spiders have a joined head and thorax  
and an a\_\_\_\_\_.
2. An earthworm is an invertebrate because it  
does not have a b\_\_\_\_\_.
3. Snails' eyes are on the  
t\_\_\_\_\_.
4. Snails slide on m\_\_\_\_\_.
5. Ants seem to be w\_\_\_\_\_  
because they work hard.
6. Ants are classified as i\_\_\_\_\_  
because they have six legs.
7. Any animal without a backbone is an  
i\_\_\_\_\_.
8. A h\_\_\_\_\_ is  
a statement that can be tested to tell if it is true.



## Invertebrate Facts

## BLM 3.6C

Use the Word Bank to complete the sentences. The first letter of each answer is done for you.

<b>Word Bank</b>	tentacles	wise	insects	backbone
	invertebrate	mucus	abdomen	hypothesis

1. Spiders have a joined head and thorax  
and an abdomen.
2. An earthworm is an invertebrate because it  
does not have a backbone.
3. Snails' eyes are on the  
tentacles.
4. Snails slide on mucus.
5. Ants seem to be wise  
because they work hard.
6. Ants are classified as insects  
because they have six legs.
7. Any animal without a backbone is an  
invertebrate.
8. A hypothesis is  
a statement that can be tested to tell if it is true.



## ***Project: Animal Habitat Description***

**BLM 4.1A**

### **For the Teacher**

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 4.1B Project: Animal Habitat** and have students research and classify a specific animal of their choice and its habitat.
- This project can be completed in class or as a homework assignment.
- Take students to the library or provide printed or electronic resources for them to use in class. They will also need a folder to hold their notes.
- Plan to allow time for students to research and to present their project at the end of Chapter 4 Habitats.
- Have students follow the directions and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send the rubric home.

### **Description of the Project**

- Have students choose an animal, classify it (bird, fish, mammal, reptile, amphibian, invertebrate), and research its habitat. Provide a list from which they can choose.
- Students will need to collect the following information and items: name and classification of the animal, a name and description of the animal's habitat, and a picture of the animal. The habitat description should include ways that the habitat meets the animal's needs.
- Students should write about the above information in complete sentences. They should submit their written work and animal picture in a folder.
- Direct students to use the rubric and directions found on BLM 4.1B to guide them in their work. They should use this rubric as a checklist during their project work. Each time a step is completed, they should check off the corresponding item.
- When they are finished, students should turn in BLM 4.1B and present their reports to the class.



Name: \_\_\_\_\_

## **Project: Animal Habitat**

**BLM 4.1B**

### **Directions**

Choose an animal and its habitat to research. Write a report. Include these:

- Name and classification of your animal
- Name and description of your animal's habitat
- Description of how the habitat provides for your animal's needs
- A picture of your animal



Write the above information on your paper in complete sentences. Place the paper and the picture of your animal in a folder. This is your animal habitat report.

Use the following as a checklist for your report. Check the boxes in the first column as you complete the tasks. Then, you are finished!

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I wrote the name and the classification of my animal on my paper.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote the name and description of my animal's habitat.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote about how this habitat provides for my animal's needs.	<input type="checkbox"/>
<input type="checkbox"/>	I have a picture of my animal.	<input type="checkbox"/>
<input type="checkbox"/>	I put my report in a folder.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent 3 Well done 2 Good 1 Needs work

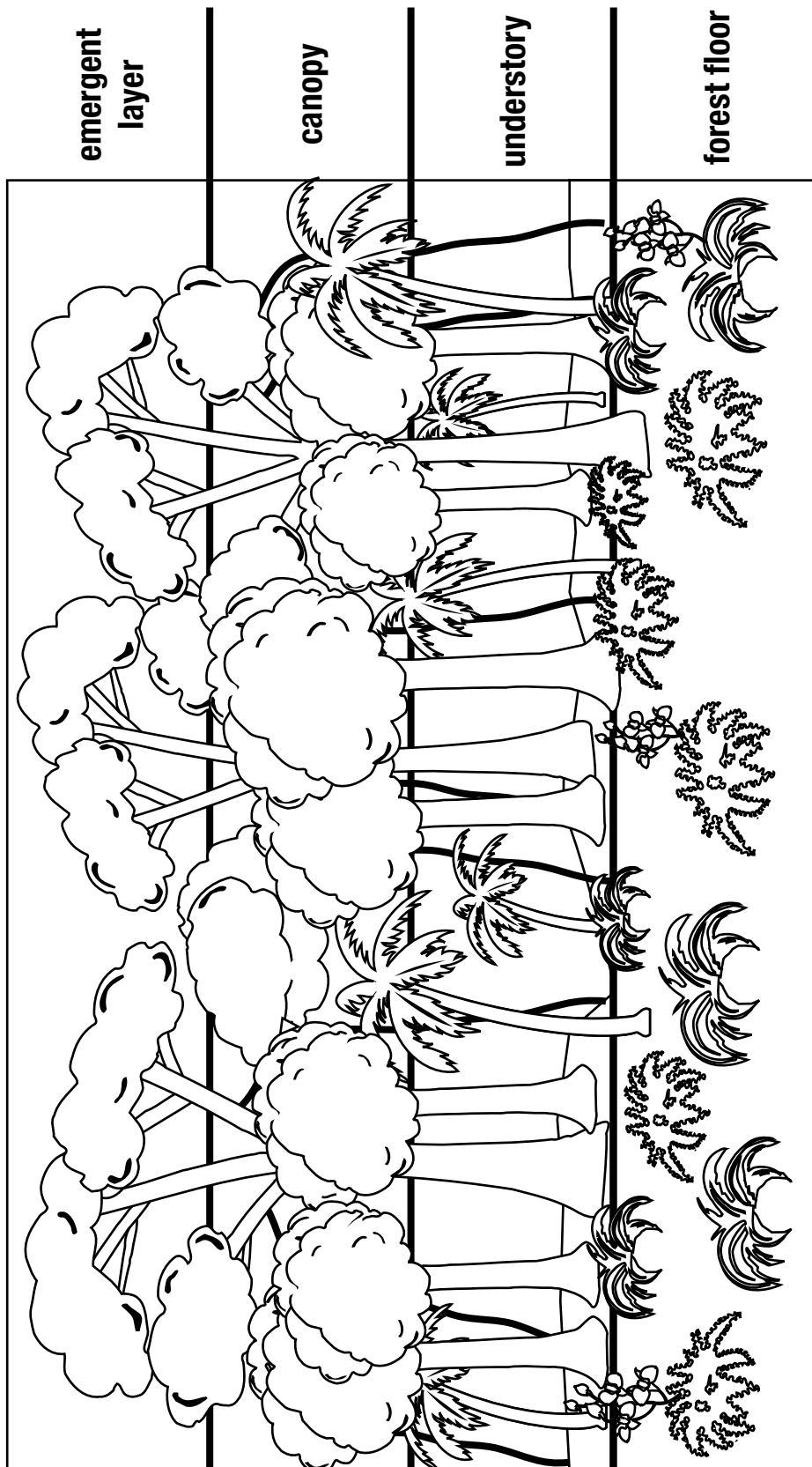
**Teacher Comments:**

Name: \_\_\_\_\_

## ***Rain Forest Layers***

**BLM 4.3A**

Color each layer of the tropical rain forest after your teacher reads its description.





**seed** (plant part)

**mouse** (mammal)

**hawk** (bird)

**acorn** (plant part)

**squirrel** (mammal)

**fox** (mammal)

**minnow** (small fish)

**fly** (insect, invertebrate)

**duck** (bird)

**weasel** (mammal)

**otter** (mammal)

**crane** (bird)

**alligator** (reptile)

**root** (plant part)

**dragonfly** (insect, invertebrate)

**frog** (amphibian)

**wolf** (mammal)

## ***Food Chain***

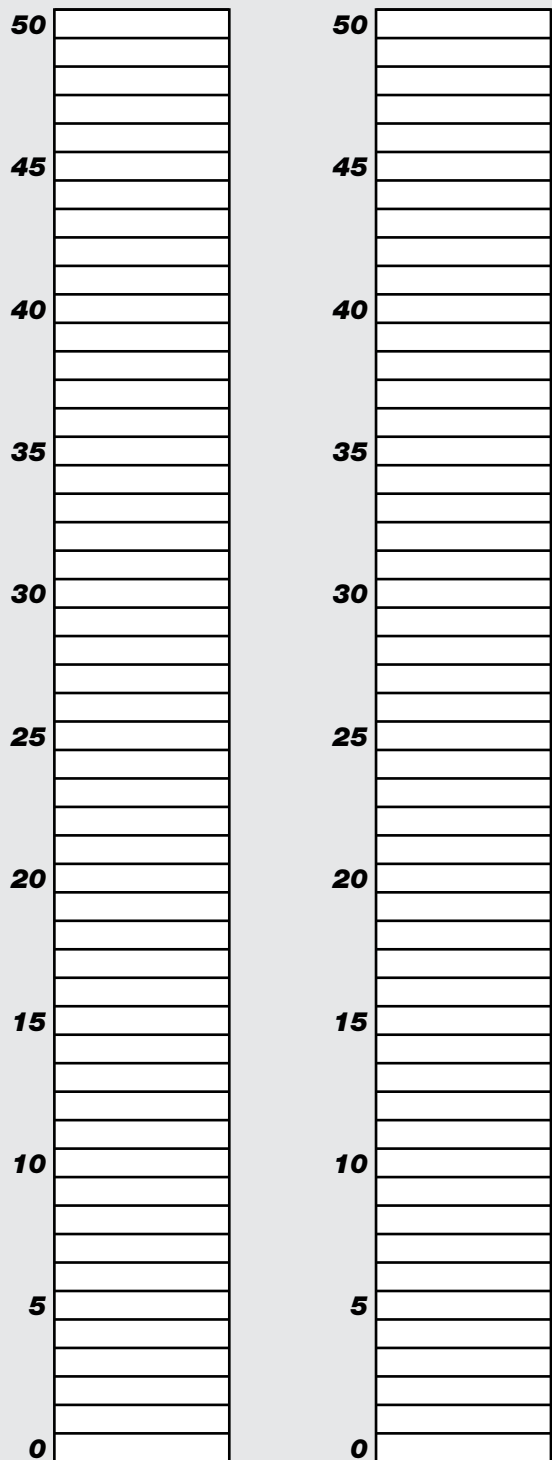
**BLM 4.4A**

Possible food chains are:  
seed, mouse, hawk

acorn, squirrel, fox

root, crane, alligator

# Circles Counted

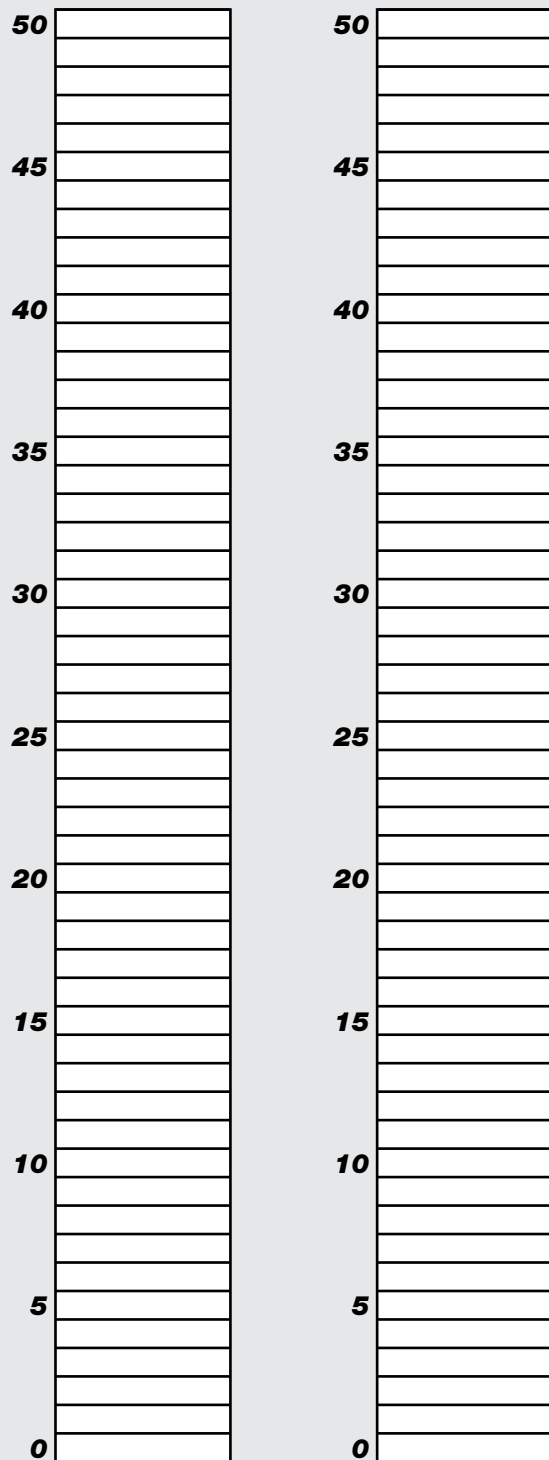


**green**

**orange**



# Circles Counted



**green**

**orange**

Name: \_\_\_\_\_

## ***Desert Animals***

**BLM 4.5B**

Draw more animal tracks to match the desert animals with their correct description.



During the day, my large ears keep me from overheating. At night, I do much of my hunting.



My camouflage keeps me safe from predators. It also lets me sneak up on the mice that I eat. Because I am a reptile, I like to lie in the sun.



My large ears let heat escape from my body. My long back legs help me quickly hop away from danger.

My large bill helps me catch lizards. My brown coloring keeps me safe from predators.



## Desert Animals

BLM 4.5B

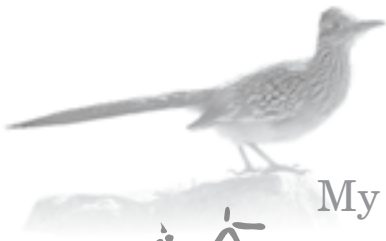
Draw more animal tracks to match the desert animals with their correct description.



During the day, my large ears keep me from overheating. At night, I do much of my hunting.



My camouflage keeps me safe from predators. It also lets me sneak up on the mice that I eat. Because I am a reptile, I like to lie in the sun.



My large ears let heat escape from my body. My long back legs help me quickly hop away from danger.



My large bill helps me catch lizards. My brown coloring keeps me safe from predators.



Name: \_\_\_\_\_

## Chapter 4 Test

**BLM 4.8A**

Use the words in the Word Bank to complete the sentences.

<b>Word Bank</b>	camouflage nocturnal	pollute habitat	food chain endangered
------------------	-------------------------	--------------------	--------------------------

1. An animal that is \_\_\_\_\_ is close to becoming extinct.
2. A cat eats a bird that has eaten a worm. This sequence is an example of a \_\_\_\_\_.
3. A rattlesnake's brown coloring and spotted markings are the snake's \_\_\_\_\_.
4. A place where an animal lives and finds food and shelter is called a \_\_\_\_\_.
5. When people \_\_\_\_\_ air, water, or land, it harms plants and animals.
6. Animals that hunt at night are \_\_\_\_\_.

Write the number of the habitats on the line in front of the correct animal.

- |                         |                     |
|-------------------------|---------------------|
| 7. desert               | _____ moose         |
| 8. polar region         | _____ crane         |
| 9. tropical rain forest | _____ jackrabbit    |
| 10. wetland             | _____ howler monkey |
| 11. evergreen forest    | _____ penguin       |



## Chapter 4 Test

BLM 4.8A

Use the words in the Word Bank to complete the sentences.

<b>Word Bank</b>	camouflage	pollute	food chain
	nocturnal	habitat	endangered

1. An animal that is \_\_\_\_\_ **endangered** \_\_\_\_\_ is close to becoming extinct.
2. A cat eats a bird that has eaten a worm. This sequence is an example of a \_\_\_\_\_ **food chain** \_\_\_\_\_.
3. A rattlesnake's brown coloring and spotted markings are the snake's \_\_\_\_\_ **camouflage** \_\_\_\_\_.
4. A place where an animal lives and finds food and shelter is called a \_\_\_\_\_ **habitat** \_\_\_\_\_.
5. When people \_\_\_\_\_ **pollute** \_\_\_\_\_ air, water, or land, it harms plants and animals.
6. Animals that hunt at night are \_\_\_\_\_ **nocturnal** \_\_\_\_\_.

Write the number of the habitats on the line in front of the correct animal.

7. desert
8. polar region
9. tropical rain forest
10. wetland
11. evergreen forest

- 11 moose  
10 crane  
7 jackrabbit  
9 howler monkey  
8 penguin

Name: \_\_\_\_\_

## **Habitat Facts**

**BLM 4.8B**



Fill in the circle beside the word that best completes the sentences.

1. A tropical \_\_\_\_ is a habitat suited for tapirs and monkeys.  
☐ desert                      ☐ rain forest                      ☐ mountain
2. Desert animals that hunt at night when it is cooler are \_\_\_\_.  
☐ prey                      ☐ endangered                      ☐ nocturnal
3. The Arctic and Antarctica are \_\_\_\_ regions.  
☐ polar                      ☐ freshwater                      ☐ endangered
4. An alligator's characteristics help it live in a \_\_\_\_.  
☐ desert                      ☐ evergreen forest                      ☐ wetland
5. Three ways to lessen pollution are to reduce, reuse, \_\_\_\_.  
☐ recycle                      ☐ read                      ☐ redo
6. An animal group that is \_\_\_\_ is close to extinction.  
☐ camouflaged                      ☐ endangered                      ☐ predators



Fill in the circle beside the word that best completes the sentences.

**1.** A tropical \_\_\_\_ is a habitat suited for tapirs and monkeys.

☐ desert

☒ rain forest

☐ mountain

**2.** Desert animals that hunt at night when it is cooler are \_\_\_\_.

☐ prey

☐ endangered

☒ nocturnal

**3.** The Arctic and Antarctica are \_\_\_\_ regions.

☒ polar

☐ freshwater

☐ endangered

**4.** An alligator's characteristics help it live in a \_\_\_\_.

☐ desert

☐ evergreen forest

☒ wetland

**5.** Three ways to lessen pollution are to reduce, reuse, \_\_\_\_.

☒ recycle

☐ read

☐ redo

**6.** An animal group that is \_\_\_\_ is close to extinction.

☐ camouflaged

☒ endangered

☐ predators

## Project: Classic Spool-Toy Description

**BLM 5.1A**

### For the Teacher

- The following project can be used after Lesson 5.1 as an additional activity or an alternative assessment. The students could complete the project in the classroom or as a homework assignment.
- Use **BLM 5.1B Project: Classic Spool Toy** to have students construct a rubber-band-powered spool toy.
- The toy demonstrates the principles of stored energy and its conversion into energy of motion. Students will write a paragraph explaining how these two types of energy are involved in the operation of the toy. To operate the toy, energy must first be supplied by moving the stick with the hand in order to wind up the rubber band “motor.” The stretched rubber band, in its wound-up position, stores this energy. When the student lets go of the toy, the stored energy in the motor is released and transferred to the spool “wheels” as the rubber band unwinds and moves the spool across the floor.
- Direct students to follow the directions and to use the rubric as a checklist for self-assessment. Use the teacher portion of the rubric to assess their work and then send the rubric home.

### Description of the Project

- Each student will construct a spool toy from a wooden or plastic spool, a rubber band, a toothpick, a thin stick, and a conical faucet washer.
- Students will need to do the following: make the toy, test the toy, and describe how energy is stored in the toy and how energy makes the toy move.
- Encourage students to experiment in order to modify and perfect their toy. Consider holding a class competition to discover which toy is the fastest and which one travels the farthest.
- Direct students to use the rubric and the directions found on BLM 5.1B to guide them in their work. Each time a portion of the project is completed, guide students to check off the corresponding item on the list. Using this procedure will help them keep track of their progress.
- When they are finished, students should turn in BLM 5.1B and their one-paragraph description. They should be prepared to present their toy to the class. Display the toys in the classroom.

Name: \_\_\_\_\_

## Project: Classic Spool Toy

BLM 5.1B

### Directions

1. Push the rubber band through the spool's hole. A loop should stick out on either side.
2. Place a short piece of toothpick through one loop. Then pull the other loop tight so that the stick is pulled against the side of the spool. (Diagram 1)
3. Place a faucet washer over the loose loop. Press the washer toward the spool's other side. (Diagram 2)
4. Insert the longer stick into the loose loop. Begin turning the stick to wind up the rubber band inside the spool. (Diagram 2)
5. Wind the rubber band tight. Then place the toy on the floor. Let it go. (Diagram 3)
6. Write about how you can store energy in the toy and how energy makes it move.

Diagram 1



Diagram 2



Diagram 3



Use the following as a checklist.

student		teacher
<input type="checkbox"/>	I made my toy.	<input type="checkbox"/>
<input type="checkbox"/>	I tried my toy and got it to work well.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote about how I stored energy in the toy and how energy made it move.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent 3 Well done 2 Good 1 Needs work

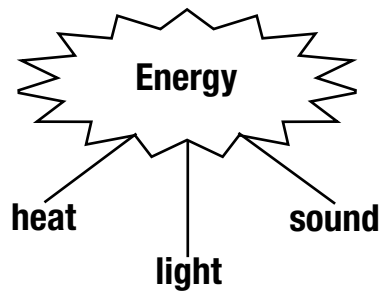
**Teacher Comments:**

Name: \_\_\_\_\_

## ***Things That Produce Energy***

**BLM 5.1C**

Heat, light, and sound are three types of energy.



**1.** Write the names of two items in a kitchen that produce heat.

---

---

**2.** Write the names of two items in a school that produce light.

---

---

**3.** Write the names of two items in a house that produce sound.

---

---

## ***Stored-Energy Demonstration***

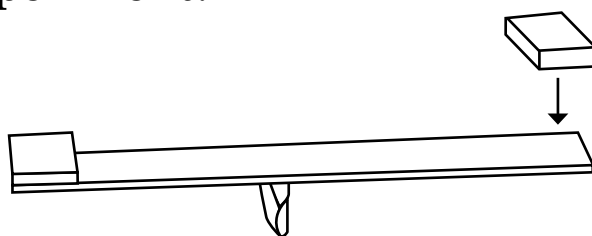
**BLM 5.4A**

<b>Materials</b>	Ruler, rectangular pencil eraser, plastic blocks
<b>Science Concept</b>	Two identical objects have different amounts of stored energy when held at different heights.
<b>Demonstrate</b>	Use a ruler and an eraser to make a beam balance. Place a plastic block on one end of the balance. Move the ruler along the eraser until it is balanced.

Hold a second plastic block about 10 inches above the other end of the balance. Drop the block. Watch the block on the end of the balance.

Reset the ruler so that it is balanced with the plastic block on one end. Now drop the second block from about 20 inches. Note how the block on the ruler bounced higher.

Think about the science concept shown in the demonstration. Share with classmates an idea for another experiment.



Name: \_\_\_\_\_

## Chapter 5 Test

**BLM 5.8A**

Use the Word Bank for the top section. Answer the questions.

1. Coal is a fossil \_\_\_\_\_.

2. Plants store energy from the  
\_\_\_\_\_.

3. People get \_\_\_\_\_  
from the plants and foods that they eat.

4. A wind turbine changes wind energy into  
\_\_\_\_\_.

5. A toy car's battery changes  
\_\_\_\_\_ energy into energy  
of motion.

6. Energy from the sun is called  
\_\_\_\_\_ energy.

### Word Bank

electricity  
energy  
sun  
solar  
fuel  
stored

---

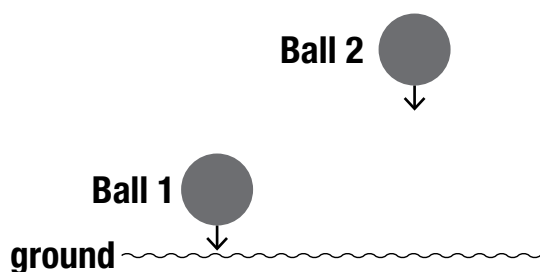
---

7. Moving air has energy. What can moving air move?

\_\_\_\_\_

8. Does Ball 1 or Ball 2 have more stored energy?

\_\_\_\_\_





## Chapter 5 Test

BLM 5.8A

Use the Word Bank for the top section. Answer the questions.

1. Coal is a fossil \_\_\_\_\_ fuel \_\_\_\_\_.

2. Plants store energy from the  
\_\_\_\_\_ sun \_\_\_\_\_.

3. People get \_\_\_\_\_ energy \_\_\_\_\_  
from the plants and foods that they eat.

4. A wind turbine changes wind energy into  
\_\_\_\_\_ electricity \_\_\_\_\_.

5. A toy car's battery changes  
\_\_\_\_\_ stored \_\_\_\_\_ energy into energy  
of motion.

6. Energy from the sun is called  
\_\_\_\_\_ solar \_\_\_\_\_ energy.

### Word Bank

electricity  
energy  
sun  
solar  
fuel  
stored

---

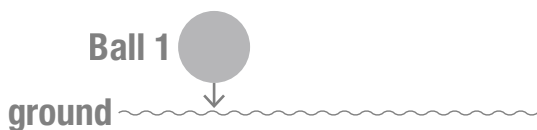
---

7. Moving air has energy. What can moving air move?

\_\_\_\_\_ Possible answers: sailboat, flag, trees \_\_\_\_\_

8. Does Ball 1 or Ball 2 have more stored energy?

\_\_\_\_\_ Ball 2 \_\_\_\_\_



### For the Teacher

- The following project can be used anytime during the chapter as an additional activity or an alternative assessment.
- Use **BLM 6.1B Project: Insulation** and have students construct an ice-cube keeper.
- This project should be done in class.
- Each student will need a plastic cup for their ice-cube keeper. The cup will fit inside the insulating ice-cube keeper. For insulation, students can choose foam, polyester filling, fabric, newspaper, plastic bags, tape, glue, ribbon, or string to construct an ice-cube keeper. Distribute ice cubes of uniform size to each student participating.
- Allow students time to make their ice-cube keepers. Then have students present them.
- Have students follow the directions and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send the rubric home.

### Description of the Project

- Students will construct an ice-cube keeper by using insulating materials provided by the teacher or brought from home.
- Students will need to do the following: choose insulating materials, construct a keeper, place an ice cube into the cup inside the keeper and record the time, check the ice cube and record the time again, and determine how long it takes for the ice cube to melt.
- Students will use the rubric and directions found on BLM 6.1B to guide them in their work. They should use this rubric as a checklist during their project work. Each time a step is completed, they should check off the corresponding item.
- Students should design their keeper to keep heat from moving to the ice cube. Students will be placing the ice cube in their keeper at the same time. Each student will note the time. To provide similar conditions, designate one area in the classroom for students to place their keeper. Have students check their keeper periodically. For each keeper, students should record the time when the ice cube was completely melted. Students will be led by the teacher in a subtraction problem to find the elapsed times. Students will determine which keepers were most successful. Students will describe to the class how the keepers were made and why they worked.
- After students are finished, they will turn in BLM 6.1B. The keepers may then be displayed in the classroom.

Name: \_\_\_\_\_

## **Project: Insulation**

**BLM 6.1B**

### **Directions**

Make an ice-cube keeper by using insulating materials such as cardboard or foam. The keeper must be large enough so a plastic cup fits inside. Follow these steps:

- Choose insulating materials with which to make your keeper.
- Construct your keeper. Make room for a plastic cup to hold the ice.
- Place an ice cube in the plastic cup. Put the cup inside your keeper and record the time.
- Check the ice when your teacher instructs you to do so. When the ice cube has completely melted, record the time again.
- Subtract the times to find out how long it took for the ice to melt.

Use this checklist for your project. When you have checked all the boxes in the first column, you are finished!

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I selected my materials.	<input type="checkbox"/>
<input type="checkbox"/>	I completed my keeper.	<input type="checkbox"/>
<input type="checkbox"/>	I put the ice cube inside at _____ (time).	<input type="checkbox"/>
<input type="checkbox"/>	My ice cube was melted by _____ (time).	<input type="checkbox"/>
<input type="checkbox"/>	My ice cube lasted for _____ minutes.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work

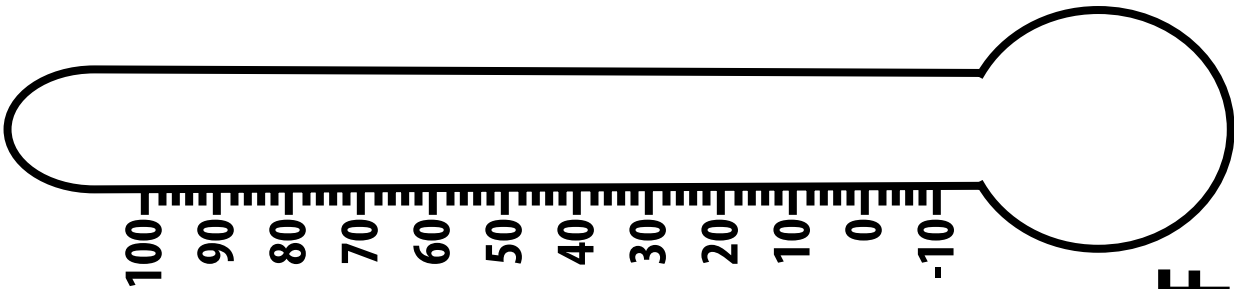
**Teacher Comments:**

Name: \_\_\_\_\_

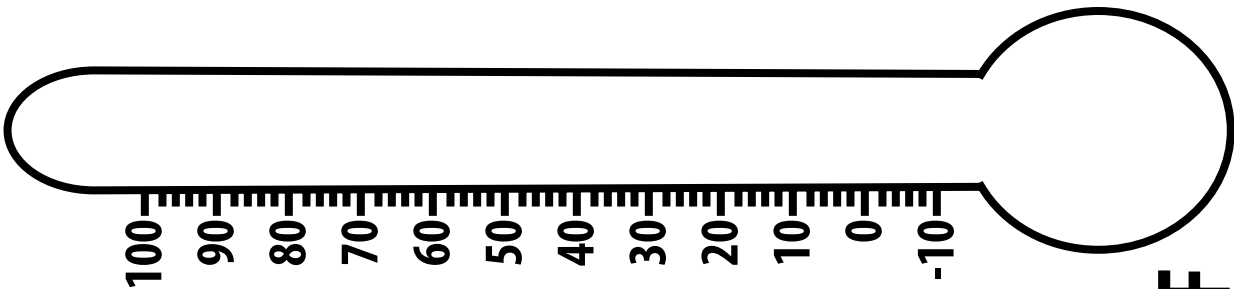
**Thermometers**

BLM 6.1C

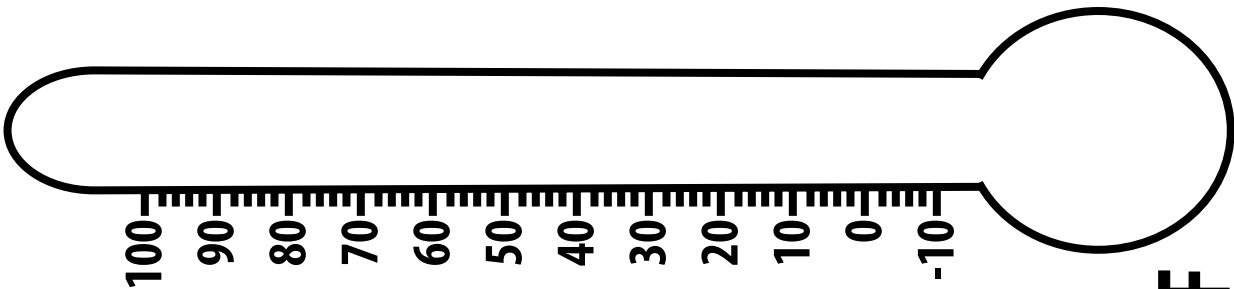
Color the thermometer to match the temperature shown. Remember to count by twos.



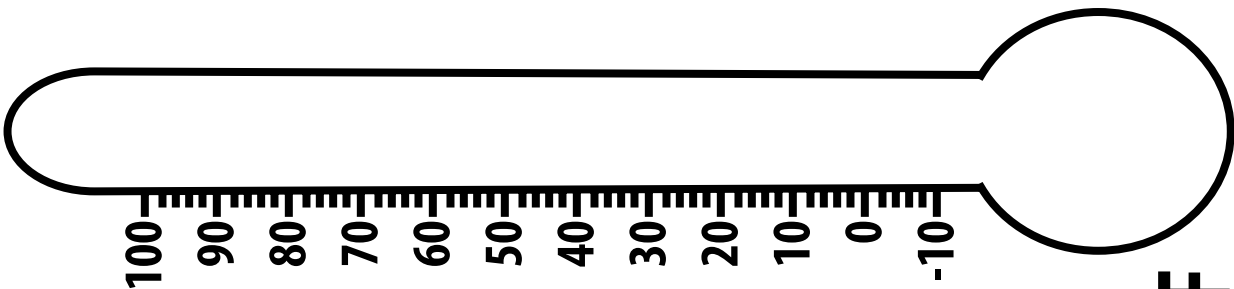
**32°F**



**60°F**

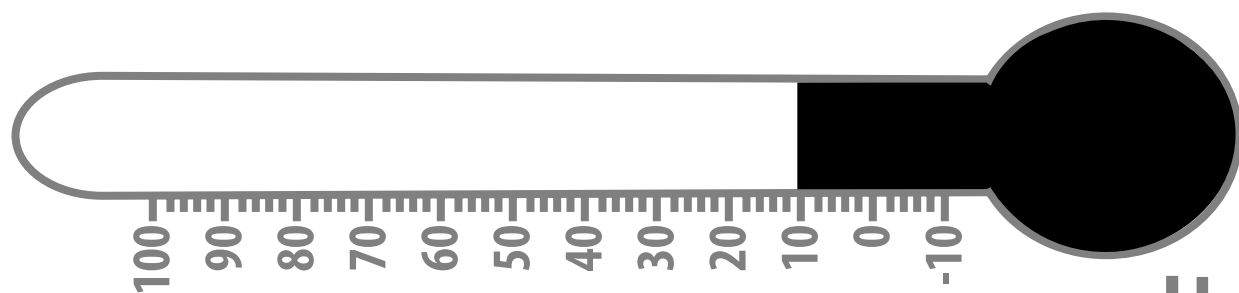
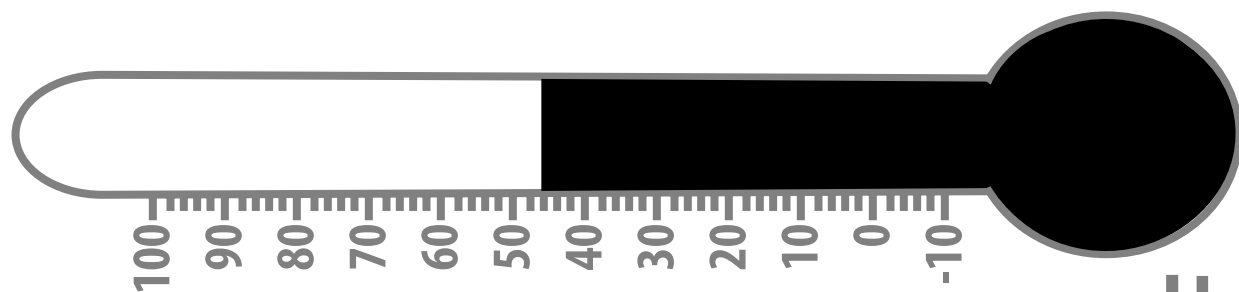
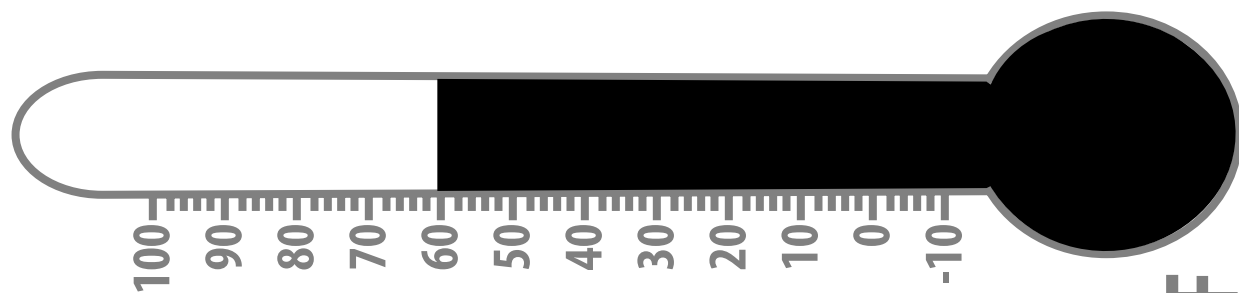
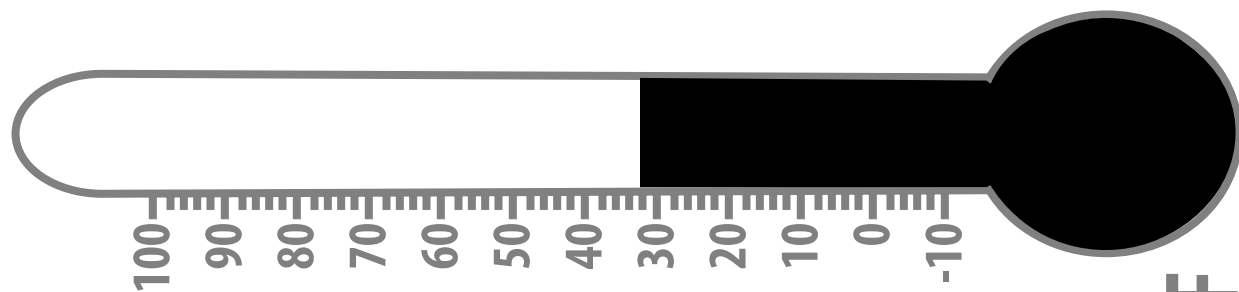


**46°F**



**10°F**

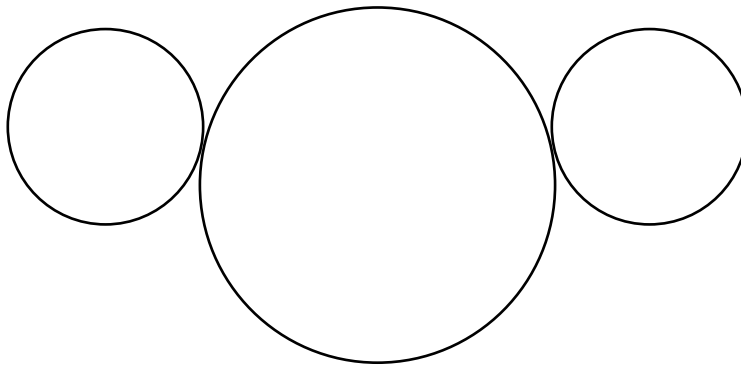
Color the thermometer to match the temperature shown. Remember to count by twos.



## Molecules

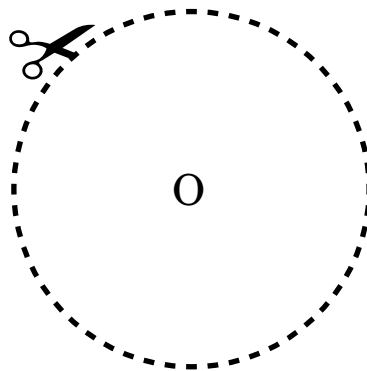
## BLM 6.1D

One of the most common molecules found on Earth is water. A water molecule has one oxygen atom and two hydrogen atoms. In the picture, the oxygen atom is in the center of the molecule.

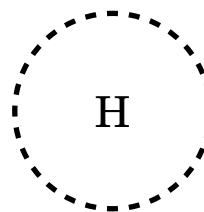
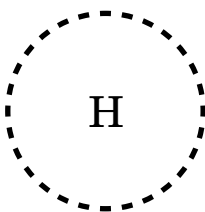


---

Color this oxygen atom blue. Cut it out and glue it on the molecule above.



Color these hydrogen atoms red. Cut them out and glue them on the molecule above.



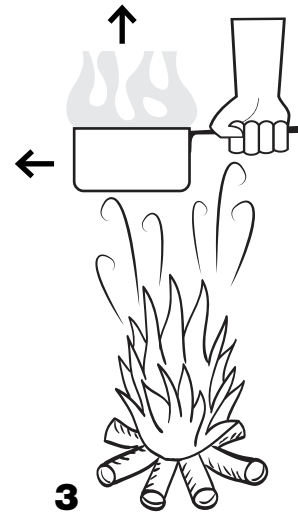
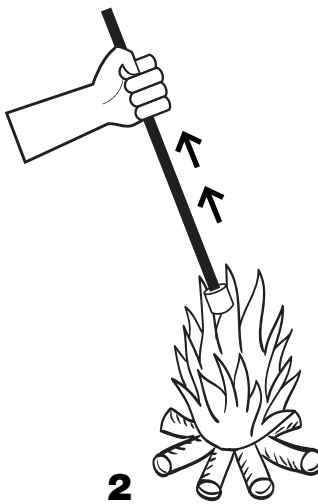
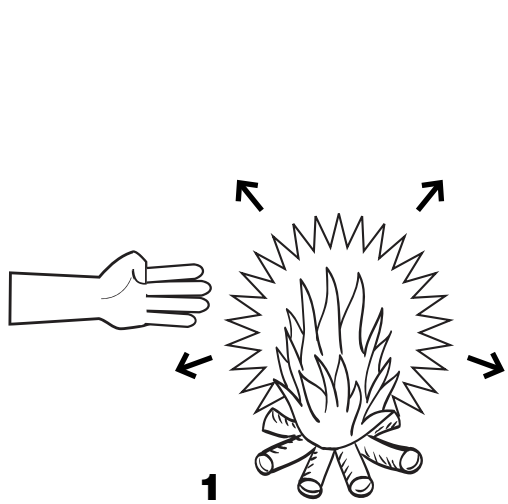
Water molecules are liquid in drinking water, solid in ice, and gas in vapor form. Even though water changes, the molecules still have one oxygen and two hydrogen atoms.

Name: \_\_\_\_\_

## Chapter 6 Test

BLM 6.8A

Write **convection**, **radiation**, or **conduction** for each picture.



1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Fill in the circle beside the word that best completes the sentences.

4. A thermometer measures \_\_\_\_.

☐ gravity      ☐ temperature

5. Dark colors absorb \_\_\_\_ heat energy than light colors.

☐ less      ☐ more

6. A foam cup is a \_\_\_\_ insulator because it does not let heat out.

☐ poor      ☐ good

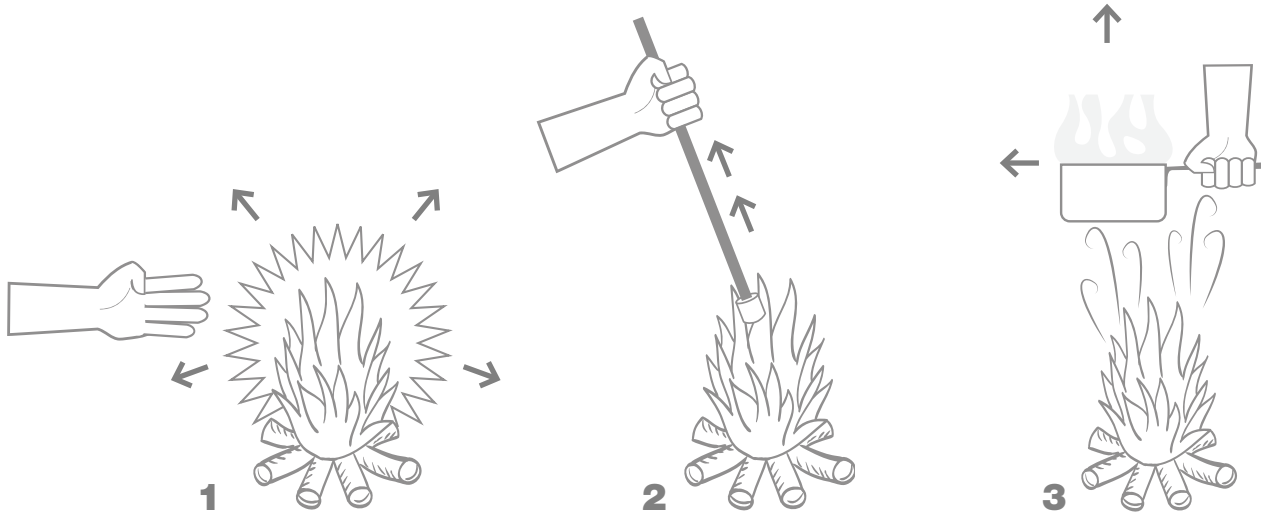
7. Water molecules in ice move \_\_\_\_ than molecules in water vapor.

☐ slower      ☐ faster

## Chapter 6 Test

## BLM 6.8A

Write **convection**, **radiation**, or **conduction** for each picture.



1. \_\_\_\_\_ radiation

2. \_\_\_\_\_ conduction

3. \_\_\_\_\_ convection

Fill in the circle beside the word that best completes the sentences.

4. A thermometer measures \_\_\_\_.

☐ gravity      ☒ temperature

5. Dark colors absorb \_\_\_\_ heat energy than light colors.

☐ less      ☒ more

6. A foam cup is a \_\_\_\_ insulator because it does not let heat out.

☐ poor      ☒ good

7. Water molecules in ice move \_\_\_\_ than molecules in water vapor.

☒ slower      ☐ faster



Name: \_\_\_\_\_

## Heat Facts

BLM 6.8B

Use the Word Bank to complete the sentences.



### Word Bank

radiation  
conductor

evaporate  
molecule

temperature  
conduction

vapor

1. A \_\_\_\_\_ is two or more atoms joined together.
2. Heat moves through metal by \_\_\_\_\_.
3. Heat causes water to \_\_\_\_\_.
4. Heat moves in waves through air or space by \_\_\_\_\_.
5. \_\_\_\_\_ is the measure of how much heat energy is in matter.
6. A \_\_\_\_\_ is a gas.
7. A \_\_\_\_\_ allows heat to pass easily.

## Heat Facts

## BLM 6.8B

Use the Word Bank to complete the sentences.



### Word Bank

radiation  
conductor

evaporate  
molecule

temperature  
conduction

vapor

1. A \_\_\_\_\_ **molecule** \_\_\_\_\_ is two or more atoms joined together.
2. Heat moves through metal by \_\_\_\_\_ **conduction** \_\_\_\_\_.
3. Heat causes water to \_\_\_\_\_ **evaporate** \_\_\_\_\_.
4. Heat moves in waves through air or space by \_\_\_\_\_ **radiation** \_\_\_\_\_.
5. \_\_\_\_\_ **Temperature** \_\_\_\_\_ is the measure of how much heat energy is in matter.
6. A \_\_\_\_\_ **vapor** \_\_\_\_\_ is a gas.
7. A \_\_\_\_\_ **conductor** \_\_\_\_\_ allows heat to pass easily.

## Project: Shadow Theater Description

## BLM 7.1A

### For the Teacher

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 7.1B Project: Shadow Theater** and have students prepare shadow theater presentations. Shadow theaters were once a popular form of entertainment, especially in Asian countries. Flat figures manipulated with sticks and strings were held much like puppets behind a translucent screen. A candle or a lamp projected the figures' shadows on a screen that faced the audience. The puppets and puppeteer were unseen.
- Take students to the library or provide printed or electronic resources for them to use in researching a Bible truth, fairy tale, or fable for their play. (Students may choose to write an original play instead.) They will also need scissors, glue, construction paper, craft sticks or chenille stems, and markers. The puppet stage requires a 100-watt desk lamp, white bulletin-board paper or a white bedsheet, and a large cardboard box or PVC pipe.
- Allow students time to construct their two shadow figures and practice their play; then have them present their play on another day.
- You will need to prepare a "light stage" on which the presentations will be made. Cut the bottom out of the cardboard box and replace it with white bulletin-board paper. A larger stage can be made with a white bedsheet or other light-colored fabric stretched around a PVC plastic frame. Set up a 100-watt desk lamp behind the stage as a light source.
- Have students follow the directions and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send the rubric home.

### Description of the Project

- Students should perform a Bible truth, a fairy tale, a fable, or an original play.
- Students will need to do the following: select a Bible truth or fictional story to present, construct characters and props, write speaking lines, practice the play, and perform the play.
- As students are practicing their play, ask them if their two puppets are transparent, translucent, or opaque. Also, ask if the screen that they are standing behind is transparent, translucent, or opaque.
- While students are practicing their plays, have them experiment holding their puppets at different distances from the light source. Remind students that light rays travel in straight lines.
- Direct students to use the rubric and directions found on BLM 7.1B to guide them in their work. Each time a portion is completed, students should check off the corresponding item on the list. Using this procedure will help them keep track of their progress.
- When they are finished, students should turn in BLM 7.1B and present their puppet play to the class. Display the shadow figures in the classroom.

Name: \_\_\_\_\_

## **Project: Shadow Theater**

**BLM 7.1B**

### **Directions**

Choose a Bible truth, a fairy tale, or a fable to present as a play.

You can also choose to write your own story instead. Make shadow puppets and practice the play.

Perform the play. You will need to do the following:

- Choose two characters and make shadow puppets.
- Practice and perform the play.



Use this checklist for your project. When you have checked all the boxes in the first column, you are finished.

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I chose a Bible truth, fairy tale, or fable, or I wrote a story for my play.	<input type="checkbox"/>
<input type="checkbox"/>	I chose two characters and made puppets.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote lines for my puppets to say.	<input type="checkbox"/>
<input type="checkbox"/>	I practiced the lines and movements for my puppet.	<input type="checkbox"/>
<input type="checkbox"/>	I performed my puppet play.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**

# Light Beam Box

BLM 7.2A

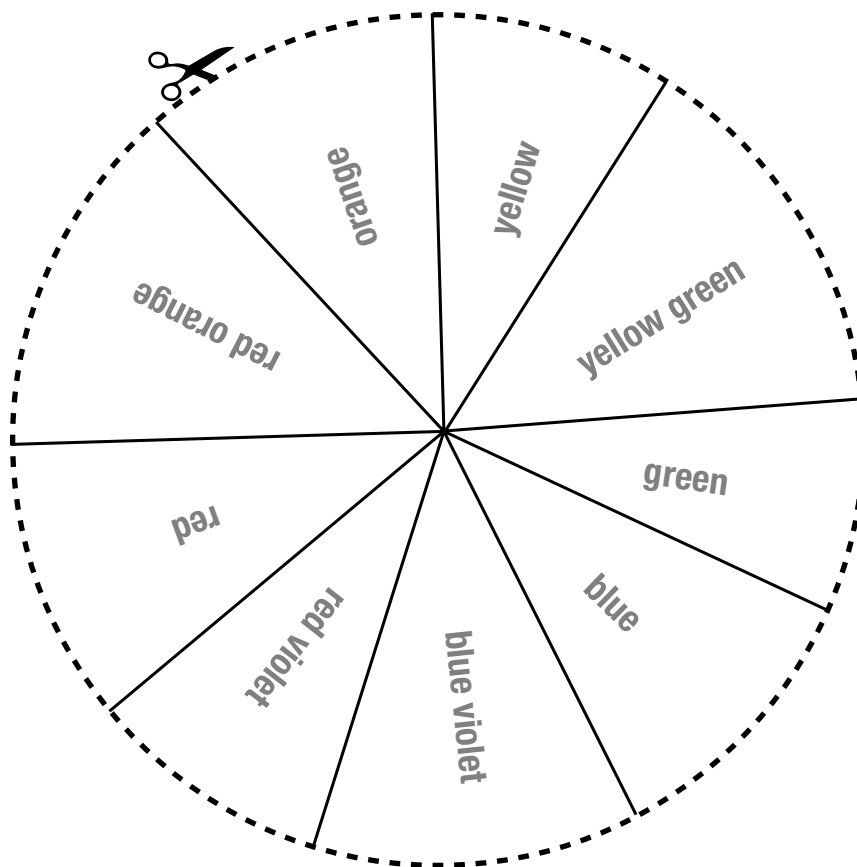
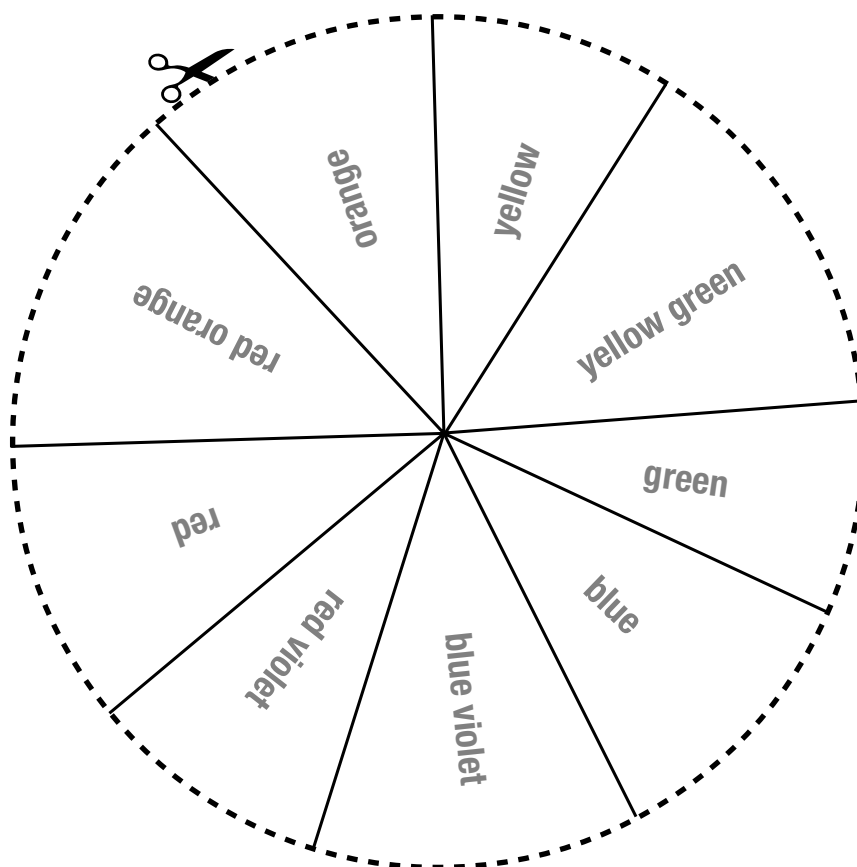
## Materials

- Empty cardboard box with a white lid, such as a copy-paper box
- Knife or box cutter
- Masking tape
- Hair pick (solid color, with wide tines)
- Small mirror (rectangular works best)
- Prism (if you choose to do the *Extension* activity in Lesson 7.7)

## Directions

1. Remove the lid and trim it so that it fits snugly inside the box. Secure the trimmed lid about 1 in. from the bottom of the box to create a level raised “floor.” (This step provides a white surface at the bottom of the box that will show the light beams better.) Next, cut a slit in a corner of the raised floor for the mirror to fit into. Be sure to angle the slit so that light entering the box will reflect off the mirror onto the side wall. Seat the bottom of the mirror below the box raised floor. (Most of the mirrored surface should stick up above the floor.) Then use masking tape to firmly secure the mirror in place.
2. At the opposite end of the box, cut a rectangular hole the size of all the hair pick’s tines. Place the main part of the pick over the hole and use masking tape to tape it firmly to the inside of the box directly over the hole.
3. Take the box outside on a sunny day, or use direct sunlight entering a window. Point the hole in the box toward the sun.
4. Remind students that the light rays travel in straight lines. When light rays reflect off a mirror, they continue to travel in straight lines until they strike an object.





Name: \_\_\_\_\_

## Chapter 7 Test

BLM 7.8A

Circle the pictures that show things that produce their own light.



Use the Word Bank to complete the sentences.

**Word  
Bank**

transparent  
lens

reflects  
refracts

straight

1. Light travels in \_\_\_\_\_ lines.
2. A mirror \_\_\_\_\_ light.
3. You can see clearly through a  
\_\_\_\_\_ object.
4. A glass of water \_\_\_\_\_  
light rays.
5. A \_\_\_\_\_ is used to focus  
light rays.

## Chapter 7 Test

BLM 7.8A

Circle the pictures that show things that produce their own light.



Use the Word Bank to complete the sentences.

**Word  
Bank**

transparent  
lens

reflects  
refracts

straight

1. Light travels in \_\_\_\_\_ **straight** \_\_\_\_\_ lines.
2. A mirror \_\_\_\_\_ **reflects** \_\_\_\_\_ light.
3. You can see clearly through a  
\_\_\_\_\_ **transparent** \_\_\_\_\_ object.
4. A glass of water \_\_\_\_\_ **refracts** \_\_\_\_\_  
light rays.
5. A \_\_\_\_\_ **lens** \_\_\_\_\_ is used to focus  
light rays.



Name: \_\_\_\_\_

## ***Light Facts***

**BLM 7.8B**

Unscramble the dark letters to make words that complete the sentences.  
Write the correct answer on the lines.

1. A **p m i r s** divides white  
light into many colors.

\_\_\_\_\_

2. An **q a u e o p** object does not allow light to pass through.

\_\_\_\_\_

3. Light-colored objects **f l r e e c t** more light than  
dark-colored objects do. \_\_\_\_\_

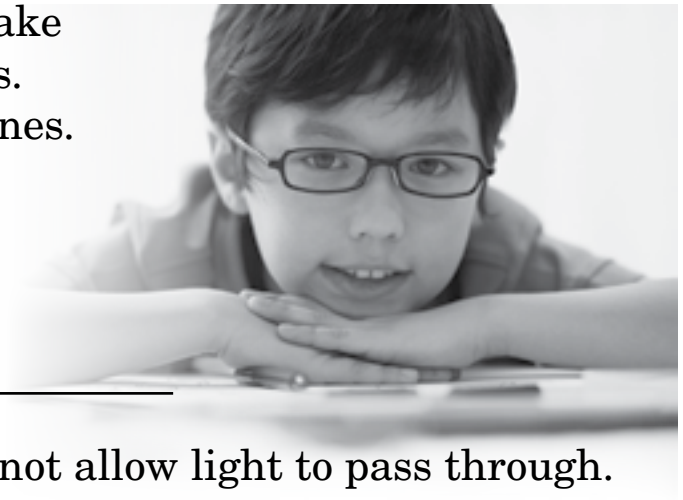
4. Red, orange, and yellow are a part of the visible  
**e c s p t r u m** of colors.

\_\_\_\_\_

5. A lens causes light rays to **r c t e f r a**, or bend.

\_\_\_\_\_

6. A **t r a n c e n t s l u** object allows only some light to pass  
through. \_\_\_\_\_



## Light Facts

## BLM 7.8B

Unscramble the dark letters to make words that complete the sentences.  
Write the correct answer on the lines.

1. A **p m i r s** divides white  
light into many colors.

\_\_\_\_\_ **prism** \_\_\_\_\_

2. An **q a u e o p** object does not allow light to pass through.

\_\_\_\_\_ **opaque** \_\_\_\_\_

3. Light-colored objects **f l r e e c t** more light than  
dark-colored objects do. \_\_\_\_\_ **reflect** \_\_\_\_\_

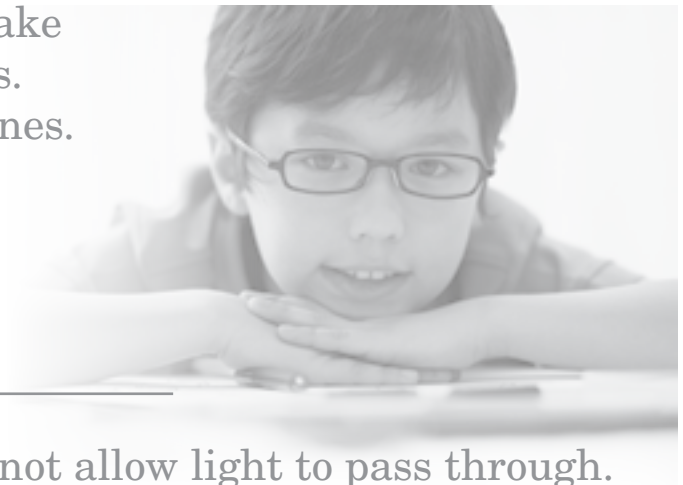
4. Red, orange, and yellow are a part of the visible  
**e c s p t r u m** of colors.

\_\_\_\_\_ **spectrum** \_\_\_\_\_

5. A lens causes light rays to **r c t e f r a**, or bend.

\_\_\_\_\_ **refract** \_\_\_\_\_

6. A **t r a n c e n t s l u** object allows only some light to pass  
through. \_\_\_\_\_ **translucent** \_\_\_\_\_



## ***Project: Weather Poster Description***

**BLM 8.1A**

### **For the Teacher**

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 8.1B Project: Weather Poster** and have students research a specific type of weather condition. One example of this might be a thunderstorm.
- This project can be completed in class or as a homework assignment.
- Take students to the library or provide printed or electronic resources for them to use in class. They will also need a folder to hold their notes.
- Plan to allow time for students to research and to present their project at the end of Chapter 8 Weather.
- Guide students in following the directions and in using the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send the rubric home.

### **Description of the Project**

- Each student will make a poster about a specific weather condition. Ideas for weather conditions from which they might choose are thunderstorms, tornadoes, hurricanes, blizzards, lightning, thunder, hail, sleet, snow, and rain.
- Students will need to include the following on their posters: the name of their weather condition, a definition, a picture, and two interesting facts.
- Instruct students to use the directions and rubric found on BLM 8.1B to guide them in their work. Have students check off the corresponding item on the list each time a portion of the project is completed. Using this procedure will help them keep track of their progress.
- When they are finished, students should turn in BLM 8.1B and present their poster to the class. The posters may then be displayed in the classroom.

Name: \_\_\_\_\_

## Project: Weather Poster

**BLM 8.1B**

### Directions

Choose a weather condition to research. Make a poster. You will need to do the following:

- Write the name of the weather condition on the poster. Define the condition.
- Find at least one picture of the weather condition.
- List two interesting facts about the weather condition.

Research your topic. Arrange the information neatly on a poster board. When you are finished, share your poster with the class.

Use the checklist for your project. When you have checked all the boxes in the first column, you are finished!

student		teacher
<input type="checkbox"/>	I wrote the name of the weather condition.	<input type="checkbox"/>
<input type="checkbox"/>	I defined the weather condition.	<input type="checkbox"/>
<input type="checkbox"/>	I included at least one picture.	<input type="checkbox"/>
<input type="checkbox"/>	I included two interesting facts.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

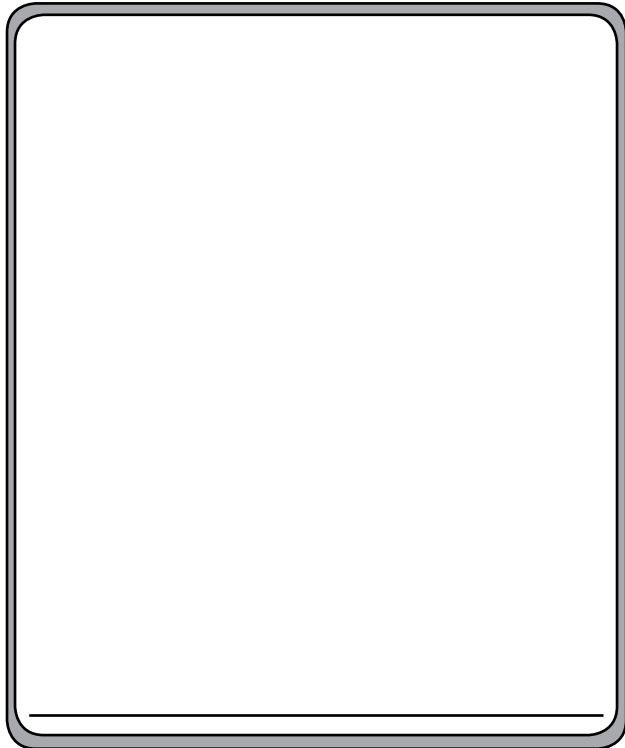
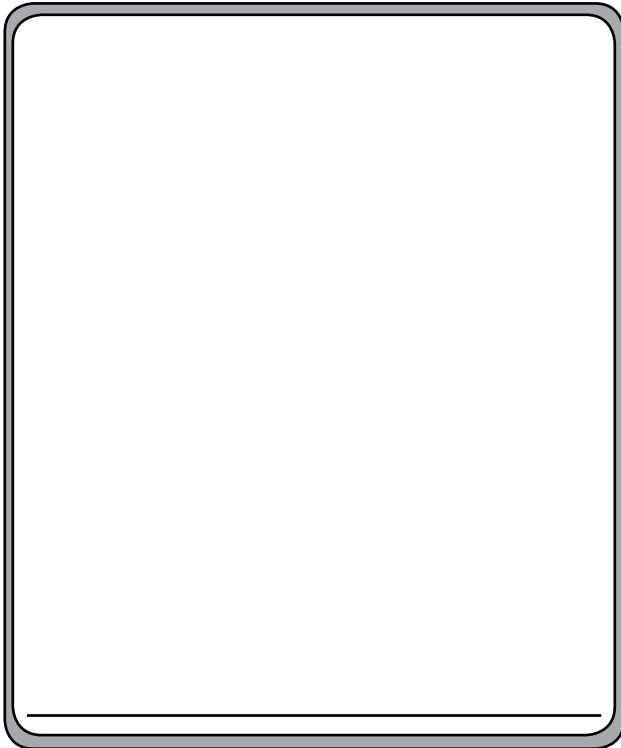
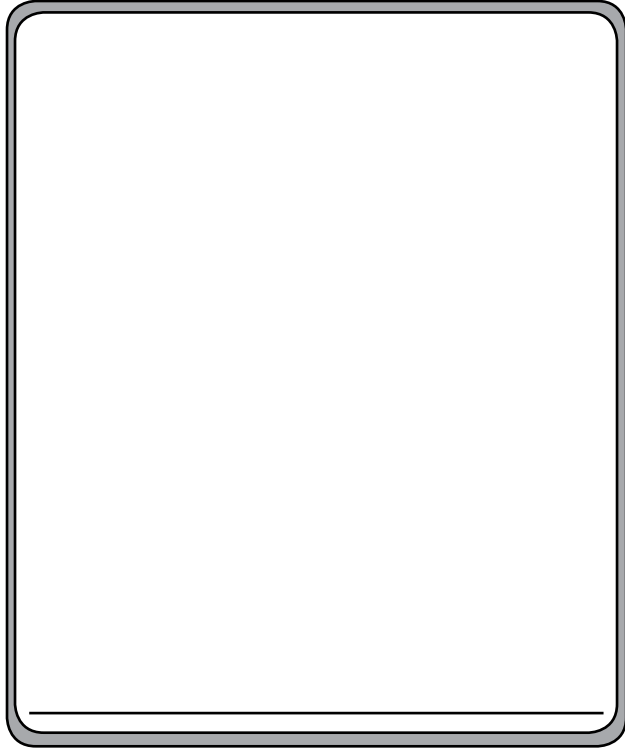
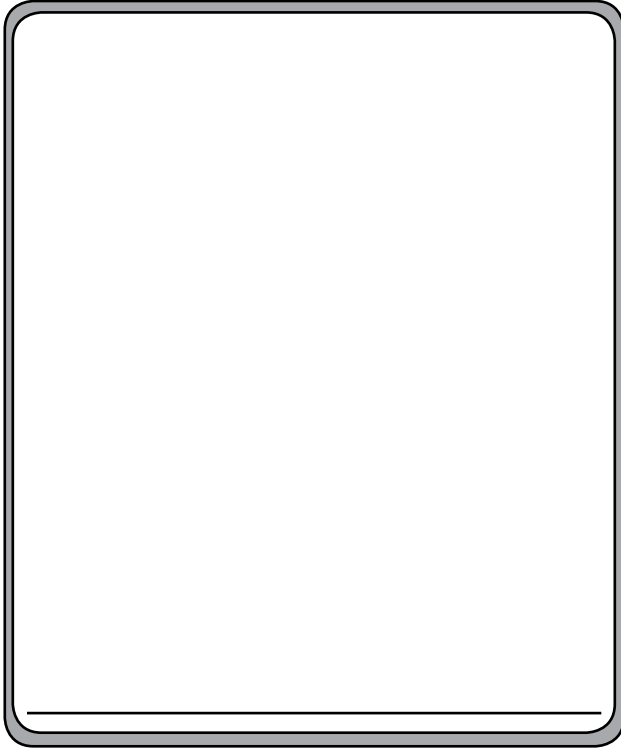
**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**

Name: \_\_\_\_\_

## ***Four Weather Factors***

**BLM 8.1C**

In the boxes, draw and label the four things that affect weather.  
Color your drawings.



## ***Four Weather Factors***

**BLM 8.1C**

In the boxes, draw and label the four things that affect weather.  
Color your drawings.

Drawings will vary.  
Drawings and labels may  
appear in any order but  
should include the sun,  
land, a large body of water,  
and air.

Name: \_\_\_\_\_

## ***Thermometer***

## **BLM 8.2A**

Color the thermometer to show the current air temperature.  
Then write the temperature, the degree symbol, and the scale abbreviation on the temperature line. Add the date and time of your temperature reading.

temperature

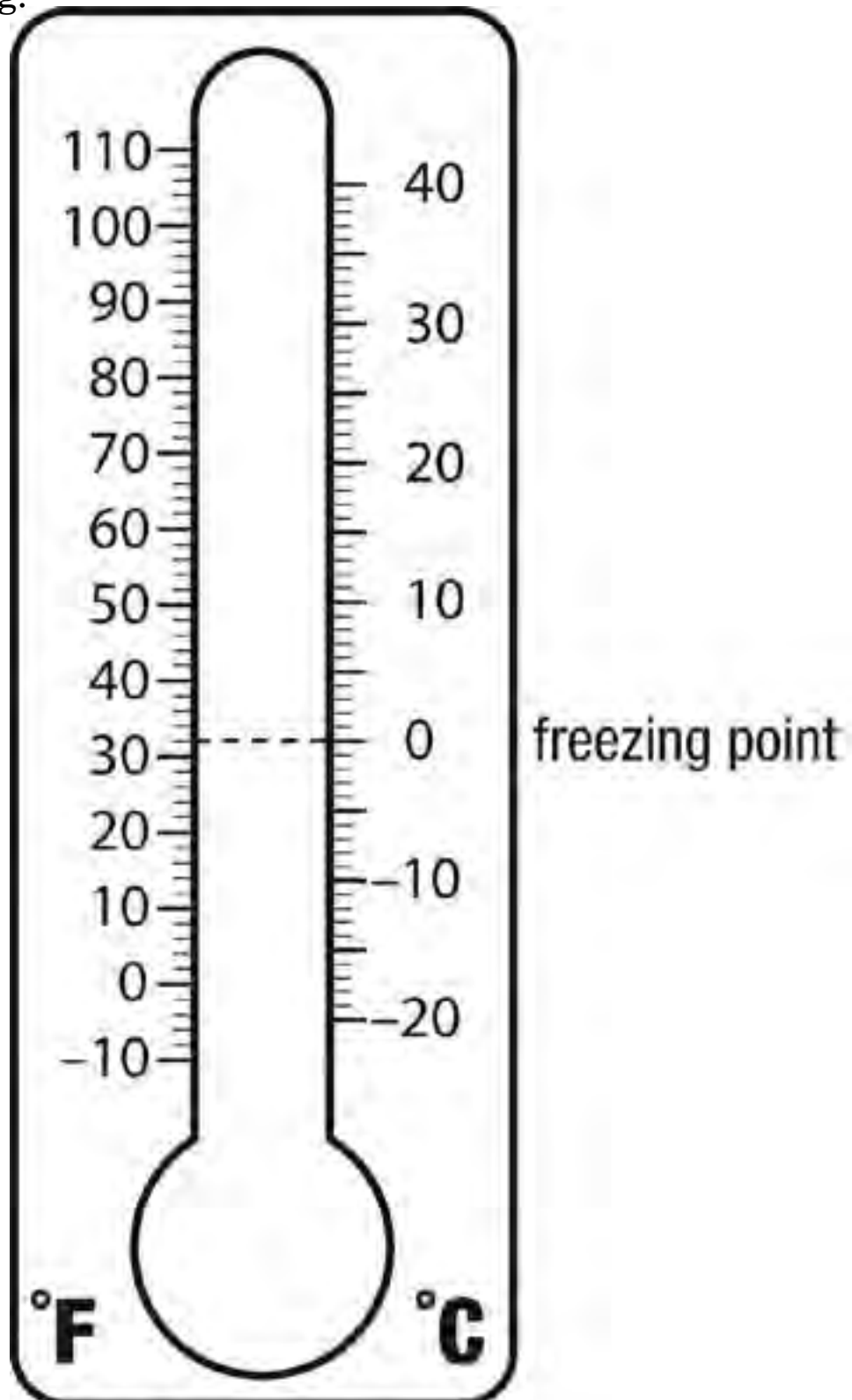
\_\_\_\_\_

date

\_\_\_\_\_

time

\_\_\_\_\_

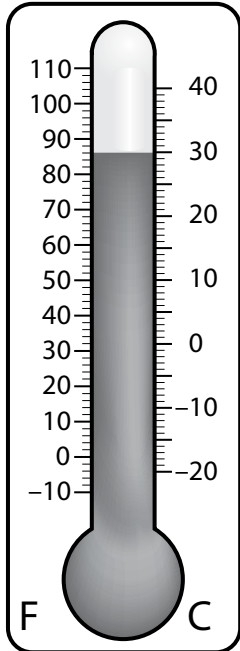


Name: \_\_\_\_\_

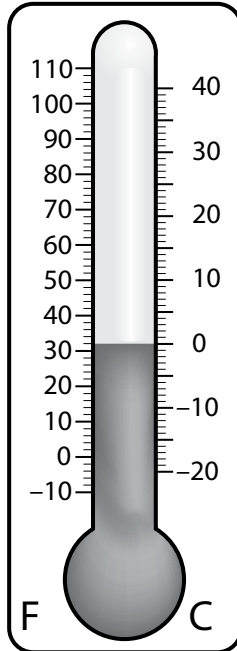
## ***Temperatures***

**BLM 8.2B**

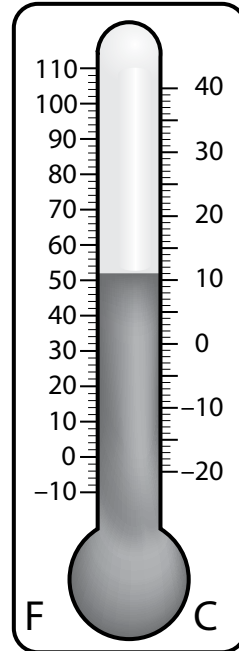
- 1.** Write the Fahrenheit and Celsius temperatures shown on the thermometers.



\_\_\_\_\_

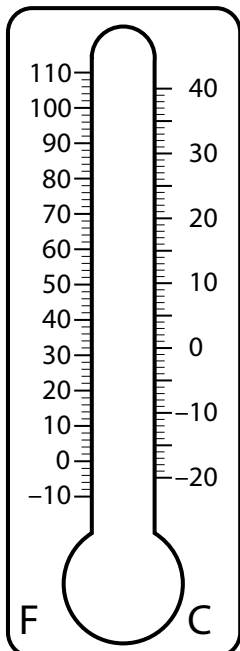


\_\_\_\_\_

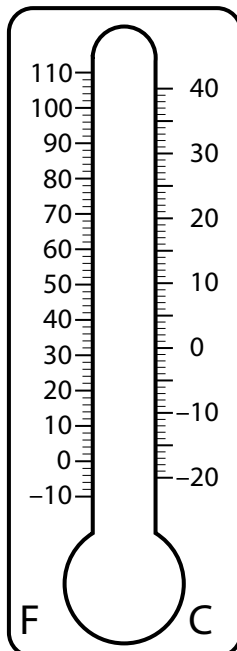


\_\_\_\_\_

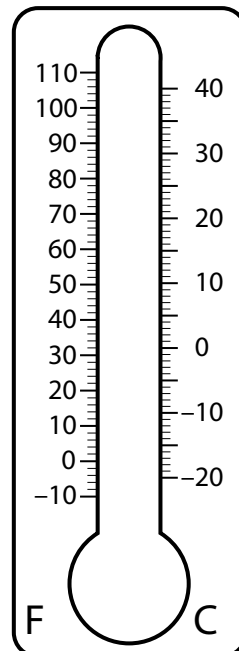
- 2.** Color each thermometer to show the temperature.



92°F



46°F



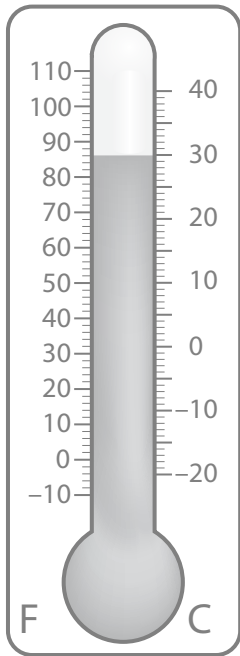
21°C



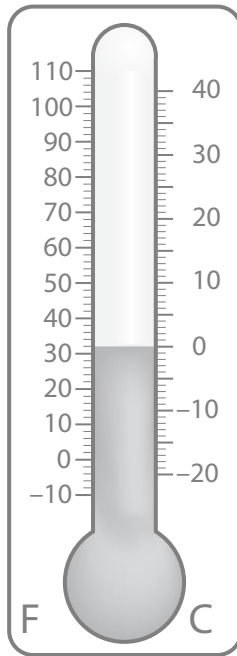
## Temperatures

## BLM 8.2B

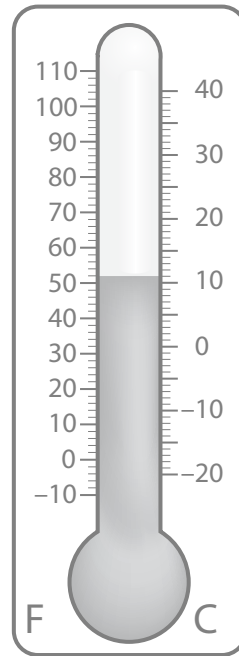
1. Write the Fahrenheit and Celsius temperatures shown on the thermometers.



86°F   30°C

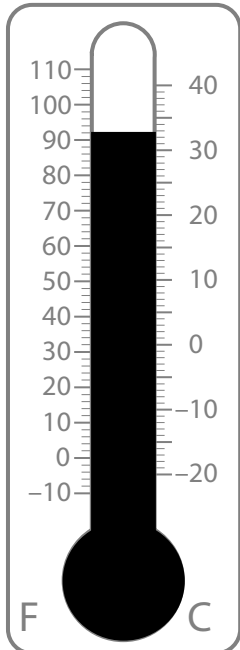


32°F   0°C

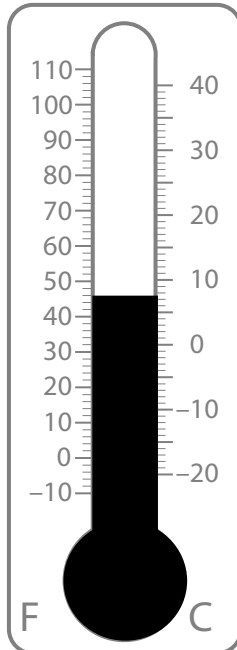


52°F   11°C

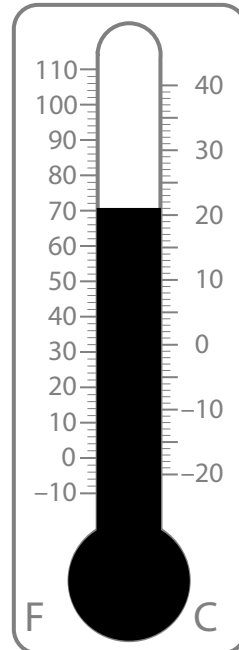
2. Color each thermometer to show the temperature.



92°F



46°F



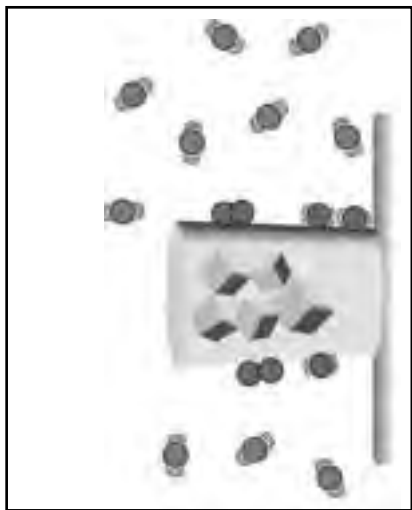
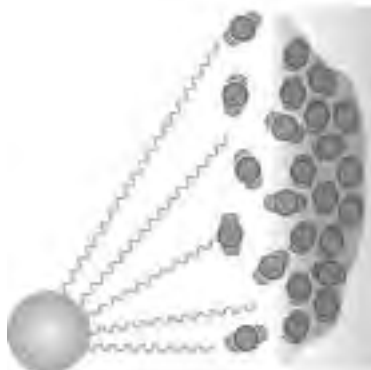
21°C

Name: \_\_\_\_\_

## Evaporation and Condensation

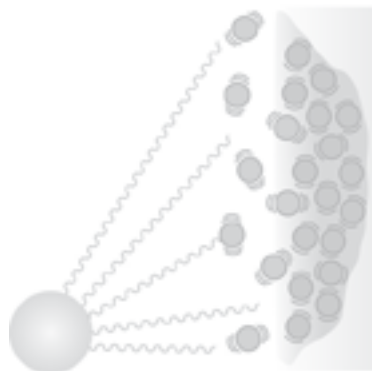
BLM 8.3A

Write **condensation** or **evaporation** to label the pictures.



Describe what the water molecules are doing in each picture.

Write **condensation** or **evaporation** to label the pictures.



evaporation

Describe what the water molecules are doing in each picture.

The molecules are evaporating into the air.

---

---

---

---



condensation

The molecules are condensing on the glass.

---

---

---

---

## Evaporation and Condensation

BLM 8.3A

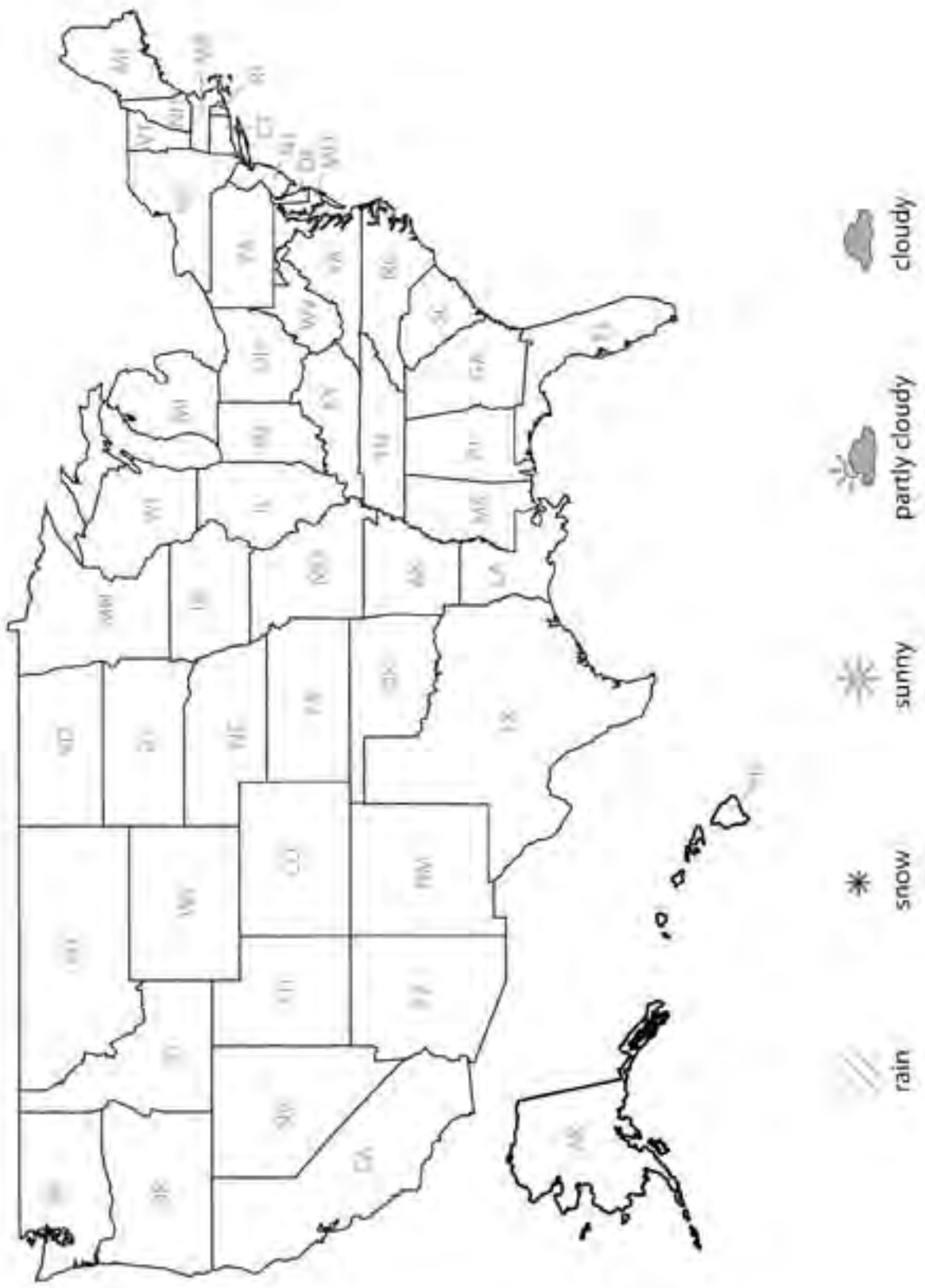


Name: \_\_\_\_\_

## Weather Map

BLM 8.7A

Use the symbols to make a weather map. Color your map.



Name: \_\_\_\_\_

## Chapter 8 Test

BLM 8.8A

1. Circle the factors that affect weather.

air                      paper                      land                      boats  
glass                      water                      buildings                      sun

Fill in the circle beside the word that best completes the sentences.

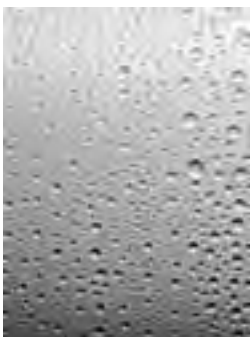
2. Water molecules move closer together when they \_\_\_\_\_.  
☐ evaporate      ☐ condense                      ☐ rise

3. Thunderstorms often have \_\_\_\_\_.  
☐ lightning      ☐ cirrus clouds                      ☐ thermometers

4. The water \_\_\_\_\_ is the way water moves through land and air.  
☐ cycle                      ☐ droplet                      ☐ weather

5. A dark cloud will most likely produce \_\_\_\_\_.  
☐ sun                      ☐ dew                      ☐ rain

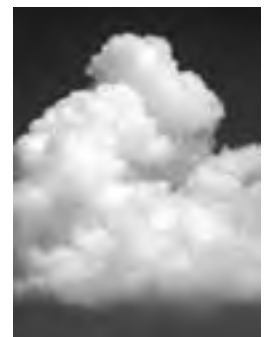
Draw a line from the words to the correct picture.



•

• thermometer •

•



• tornado •



•

• cumulus •

•



• condensation •

## Chapter 8 Test

## BLM 8.8A

1. Circle the factors that affect weather.

air

paper

land

boats

glass

water

buildings

sun

Fill in the circle beside the word that best completes the sentences.

2. Water molecules move closer together when they \_\_\_\_.

☐ evaporate

☒ condense

☐ rise

3. Thunderstorms often have \_\_\_\_.

☒ lightning

☐ cirrus clouds

☐ thermometers

4. The water \_\_\_\_ is the way water moves through land and air.

☒ cycle

☐ droplet

☐ weather

5. A dark cloud will most likely produce \_\_\_\_.

☐ sun

☐ dew

☒ rain

Draw a line from the words to the correct picture.

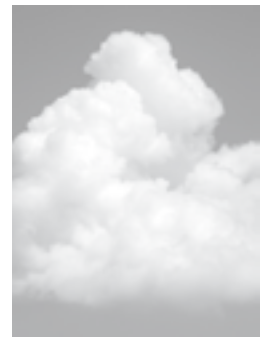


• thermometer •

• tornado •

• cumulus •

• condensation •



Name: \_\_\_\_\_

## ***Weather Facts***

**BLM 8.8B**

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	tornado	cycle	ocean	temperature
	sun	water	condensation	

1. A storm with a funnel-shaped cloud is a  
\_\_\_\_\_.
2. Water falls to the ground as rain, snow, or ice in the water  
\_\_\_\_\_.
3. Heat causes \_\_\_\_\_  
to evaporate.
4. Hurricanes form over large bodies of water like the  
\_\_\_\_\_.
5. Dew and fog form mainly through  
\_\_\_\_\_.
6. A thermometer measures  
\_\_\_\_\_ in degrees  
Fahrenheit or degrees Celsius.
7. The weather factor that provides heat energy is the  
\_\_\_\_\_.



## Weather Facts

BLM 8.8B

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	tornado	cycle	ocean	temperature
	sun	water	condensation	

1. A storm with a funnel-shaped cloud is a  
\_\_\_\_\_ **tornado** \_\_\_\_\_.
2. Water falls to the ground as rain, snow, or ice in the water  
\_\_\_\_\_ **cycle** \_\_\_\_\_.
3. Heat causes \_\_\_\_\_ **water** \_\_\_\_\_  
to evaporate.
4. Hurricanes form over large bodies of water like the  
\_\_\_\_\_ **ocean** \_\_\_\_\_.
5. Dew and fog form mainly through  
\_\_\_\_\_ **condensation** \_\_\_\_\_.
6. A thermometer measures  
\_\_\_\_\_ **temperature** \_\_\_\_\_ in degrees  
Fahrenheit or degrees Celsius.
7. The weather factor that provides heat energy is the  
\_\_\_\_\_ **sun** \_\_\_\_\_.

## Project: Ocean Report Description

BLM 9.1A

### For the Teacher

- The following project can be used after Lesson 9.6 as an additional activity or an alternative assessment. The students may complete the project in the classroom or as a homework assignment.
- Use **BLM 9.1B Project: Ocean Report** and **BLM 9.1C Project: Ocean Report World Map** and have students select an ocean to research as background information for a brief written report.
- Take students to the library or provide printed or electronic resources for them to use in class. Encyclopedias that include facts about ocean life will be useful.
- Plan time for students to research and to present their projects to their classmates.
- Direct students to follow the directions and to use the rubric as a checklist for self-assessment. Use the teacher portion of the rubric to assess their work and then send the rubric home.

### Description of the Project

- Students should choose an ocean to research.
- Students will need to include the following details in their reports: name of the ocean, location, interesting facts, and ocean animals that live there. They will also need to color in the ocean on BLM 9.1C.
- Instruct students to use the rubric and directions found on BLM 9.1B to guide them in their work. Students should use the rubric as a checklist during the project. Each time a portion is completed, they should check off the corresponding item on the list. This process will help students keep track of their progress.
- When they are finished, students should turn in BLM 9.1B and present their reports to the class. The maps may then be displayed in the classroom.

Name: \_\_\_\_\_

## **Project: Ocean Report**

**BLM 9.1B**

### **Directions**

Choose an ocean to research. Write a report.

Include the following:

- Name of the ocean
- Location of the ocean (what continent or continents it touches)
- Interesting facts about the ocean
- Name of some animals that live in this ocean
- Color in the ocean on **BLM 9.1C Project: Ocean Report World Map**



Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

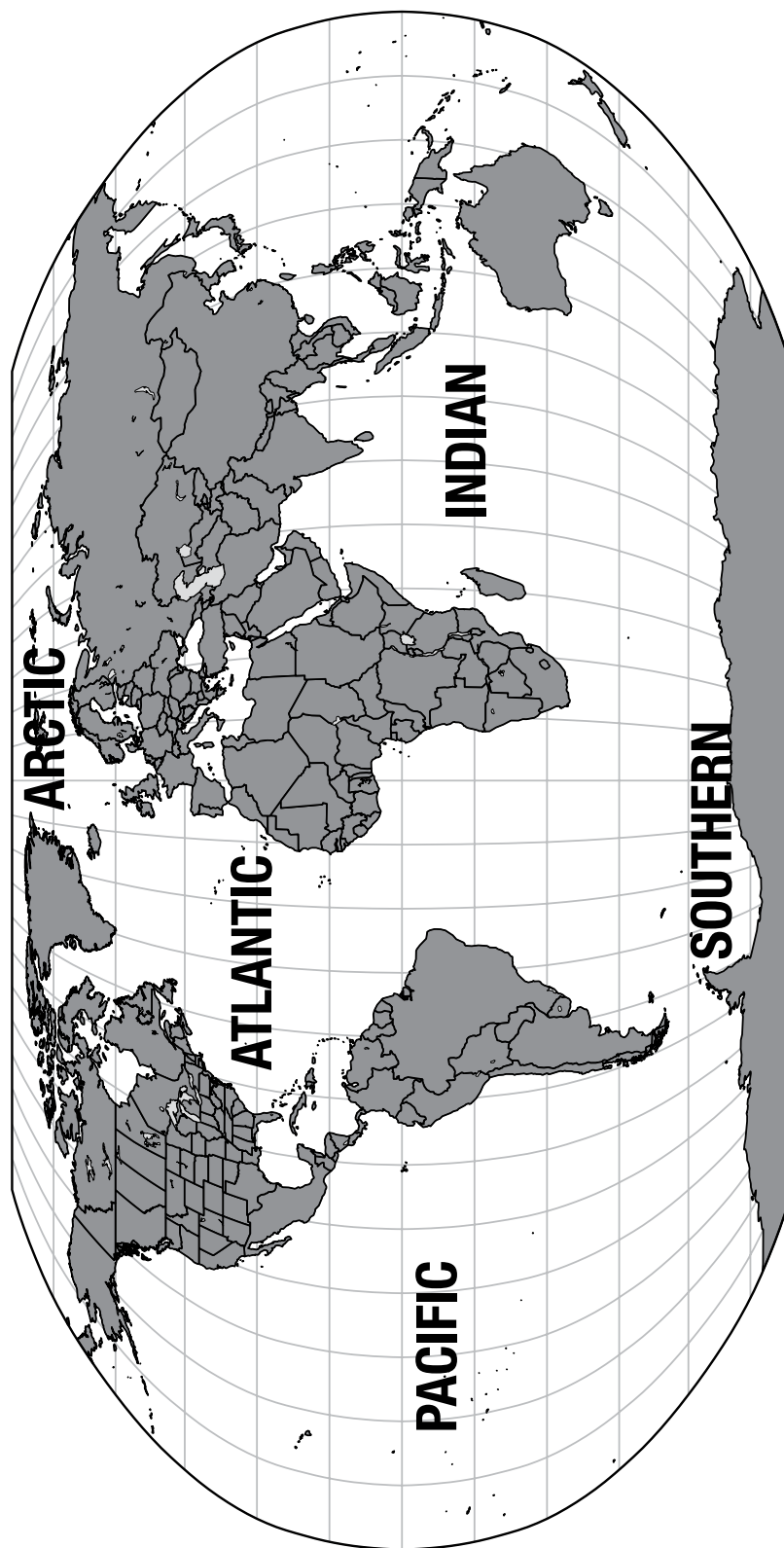
<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	I wrote the name of the ocean.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote the location of the ocean.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote interesting facts about the ocean.	<input type="checkbox"/>
<input type="checkbox"/>	I named sea animals that live in this ocean.	<input type="checkbox"/>
<input type="checkbox"/>	I colored the location of this ocean on the map.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**

Name: \_\_\_\_\_

***Project: Ocean Report World Map***

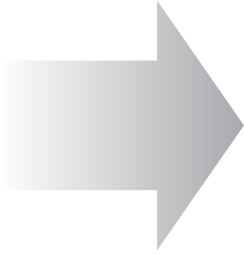
**BLM 9.1C**



Name: \_\_\_\_\_

## ***Ocean Color and Temperature***

**BLM 9.1D**



What will happen to the water after it sits for a while?

---

---

---

---



How will the water in the sun be different from the water in the shade?

---

---

---

---

## ***Ocean Floor Model***

**BLM 9.4A**

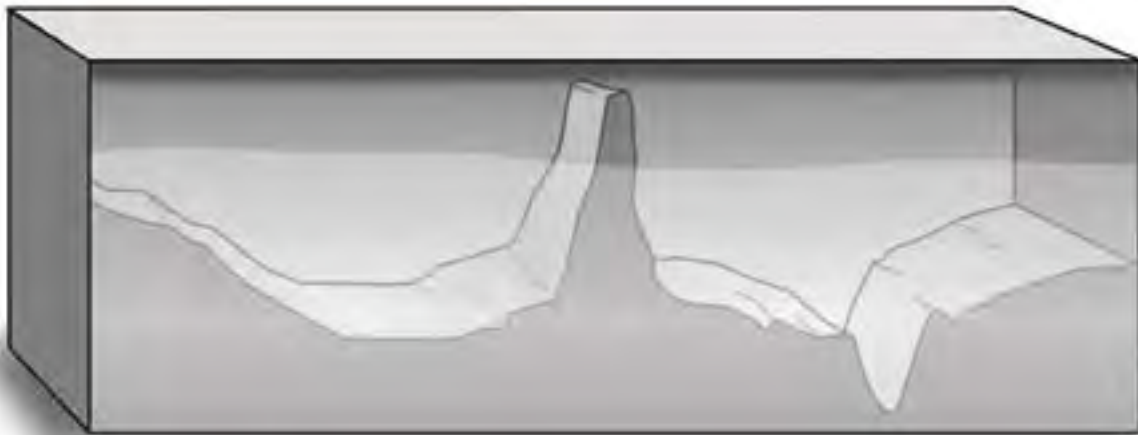
### **Materials Needed**

- Nonhardening clay or air-dry clay (Check package directions for the approximate drying time of air-dry clay.)
- Clear, watertight plastic box about the size of a shoe box
- Water

### **Directions**

Knead clay until it is soft and pliable. Place it into the box. Use a pencil to roll the clay into the corners. Continue to push the clay until it covers the bottom of the box. Add additional clay to form peaks. Press the pencil down into the clay to create ridges and trenches. For air-dry clay, you may need to allow several days for drying. Test the clay to be sure that it will not deteriorate when you add water to the box.

Fill the box with water so that at least one of the peaks is above the water line. Show students that islands are the tops of undersea mountains.



**Floaters** are generally small plants and animals that live near the surface of the water and drift with ocean currents. Individual floaters may be too small to see without a microscope; however, large groups of these plants and animals are visible. Many types of jellyfish can be seen without a microscope.

- Algae provides food to a large number of animals. Algae are plants that grow on the surface of the water.
- Jellyfish look like parachutes with tentacles hanging down. Ocean currents help jellyfish float. Jellyfish can be dangerous to swimmers.
- Kelp is a type of algae. Some types of kelp can grow to be quite long. Giant kelp has a series of gas bladders. The gas bladders look like a string of beads.

**Free swimmers** are mammals, reptiles, and fish that move freely through the water. They include a variety of mammals, sea turtles, and thousands of different types of fish.

- Sharks have streamlined bodies making it easy for sharks to swim. They eat fish, crab, and shrimp. Sharks have several rows of teeth. When they lose one, another tooth grows in its place.
- Whales and seals both have a layer of blubber that keeps them warm in cold waters. Whales are warm-blooded mammals that breathe air with their lungs. Whales need to come to the surface to breathe. Air moves in and out through the blowhole.
- Many types of fish swim in large groups called **schools**. Schools of fish often swim in the same direction as an ocean current.

**Bottom dwellers** include plants and animals on the ocean floor.

- Anemones look like plants. They attach themselves to hard surfaces. Anemones have petal-like tentacles. They can be many different colors. Anemones can also hitch a ride on the back of a hermit crab.
- Starfish have arms, or tentacles, that contain rows of tube feet. These tubes help starfish attach to rocks or coral.

## ***Ocean Trivia Clues***

**BLM 9.8A**

Cut out the cards.



I am the largest ocean.	I am an animal that stays on the ocean floor. I can be attached to the ocean floor.	I am a narrow valley in the ocean floor.	I am the study of the ocean and the plants and animals that live there.	I am an ocean plant or animal that floats on the surface.
I am the smallest ocean.	I am the ocean that surrounds the continent of Antarctica.	I am water that flows like a river from one part of the ocean to another.	I am an undersea mountain whose top rises out of the water.	I am formed by wind blowing across the surface of the ocean.
I am a scientist who studies the ocean.	I am an underwater habitat that can form in warm, shallow water. I am made from coral polyps.	I am an animal that lives in a coral reef, but I am not part of the reef.	I am a small tube-shaped animal. I can help form a reef from my stony, outer skeleton.	I am the land that slopes into ocean water.
I am a mammal, reptile, or fish that moves freely through the water.	I am the type of equipment divers wear.	I am the daily rise and fall in the level of the ocean.	I am the mineral in ocean water that helps things float.	I am a small submarine.



## Ocean Trivia Answers

BLM 9.8B

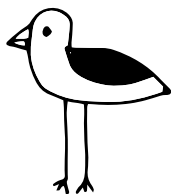
Cut out the cards.



Pacific Ocean



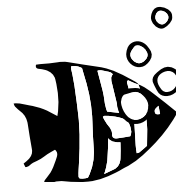
bottom dweller



trench



oceanography



floaters



Arctic Ocean



Southern Ocean



ocean current



island



wave



oceanographer



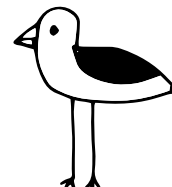
coral reef



sponge



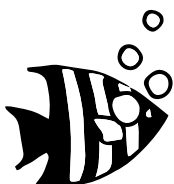
coral polyp



continental shelf



free swimmer



scuba



tide



salt



submersible

Name: \_\_\_\_\_

## Chapter 9 Test

BLM 9.8C

Draw a line to match each term with its description.

bottom dwellers •

- mammals, reptiles, and fish that move freely through the water

free swimmers •

- plants and animals that live near the surface and drift with ocean currents

floaters •

- plants and animals that stay on the ocean floor; some are attached to the ocean floor but others are not

Use the Word Bank to complete each sentence.

1. The daily rise and fall of the level of the ocean is the \_\_\_\_\_.

2. A \_\_\_\_\_ is like a river running through the ocean.

3. A \_\_\_\_\_ reef

is an underwater habitat that can form in warm, shallow water.

4. A \_\_\_\_\_ forms when wind blows across the surface of the water.

5. An \_\_\_\_\_ is an undersea mountain that rises up out of the water.

6. \_\_\_\_\_ is the study of the ocean and the plants and animals that live there.

### Word Bank

oceanography

wave

tide

coral

current

island

## Chapter 9 Test

BLM 9.8C

Draw a line to match to match each term with its description.

bottom dwellers	•	•	mammals, reptiles, and fish that move freely through the water
free swimmers	•	•	plants and animals that live near the surface and drift with ocean currents
floaters	•	•	plants and animals that stay on the ocean floor; some are attached to the ocean floor but others are not

Use the Word Bank to complete each sentence.

1. The daily rise and fall of the level of the ocean is the \_\_\_\_\_ tide \_\_\_\_\_.

2. A \_\_\_\_\_ current \_\_\_\_\_ is like a river running through the ocean.

3. A \_\_\_\_\_ coral \_\_\_\_\_ reef

is an underwater habitat that can form in warm, shallow water.

4. A \_\_\_\_\_ wave \_\_\_\_\_ forms when wind blows across the surface of the water.

5. An \_\_\_\_\_ island \_\_\_\_\_ is an undersea mountain that rises up out of the water.

6. \_\_\_\_\_ Oceanography \_\_\_\_\_ is the study of the ocean and the plants and animals that live there.

### Word Bank

oceanography  
wave  
tide  
coral  
current  
island

Name: \_\_\_\_\_

## Ocean Facts

BLM 9.8D

Use the Code Box to complete the sentences. Capitalize the first word of each sentence.

CODE BOX		
a=1	h=8	p=15
b=2	i=9	r=16
c=3	j=10	s=17
d=4	l=11	t=18
e=5	m=12	u=19
f=6	n=13	
g=7	o=14	



1. An oceanographer is a scientist who studies the ocean and the plants and  $\frac{1}{1} \frac{13}{13} \frac{9}{9} \frac{12}{12} \frac{1}{1} \frac{11}{11} \frac{17}{17}$  that live there.
2. An ocean  $\frac{3}{3} \frac{19}{19} \frac{16}{16} \frac{16}{16} \frac{5}{5} \frac{13}{13} \frac{18}{18}$  is a flow of water that moves in one direction through the ocean.
3.  $\frac{17}{17} \frac{1}{1} \frac{11}{11} \frac{18}{18}$  water causes objects to float better.
4.  $\frac{3}{3} \frac{14}{14} \frac{16}{16} \frac{1}{1} \frac{11}{11}$  polyps are tube-shaped animals that live in the ocean. They form coral reefs from their stony, outer skeletons.
5. An  $\frac{9}{9} \frac{17}{17} \frac{11}{11} \frac{1}{1} \frac{13}{13} \frac{4}{4}$  is an undersea mountain that sticks out above the surface of the ocean.

## Ocean Facts

## BLM 9.8D

Use the Code Box to complete the sentences. Capitalize the first word of each sentence.

CODE BOX		
a=1	h=8	p=15
b=2	i=9	r=16
c=3	j=10	s=17
d=4	l=11	t=18
e=5	m=12	u=19
f=6	n=13	
g=7	o=14	



1. An oceanographer is a scientist who studies the ocean and the plants and a n i m a l s that live there.  
1 13 9 12 1 11 17

2. An ocean c u r r e n t is a flow of water that moves in one direction through the ocean.  
3 19 16 16 5 13 18

3. S a l t water causes objects to float better.  
17 1 11 18

4. C o r a l polyps are tube-shaped animals that live in the ocean. They form coral reefs from their stony, outer skeletons.  
3 14 16 1 11

5. An i s l a n d is an undersea mountain that sticks out above the surface of the ocean.  
9 17 11 1 13 4

### For the Teacher

- This project can be used at any time after Lesson 10.3 as an additional activity or an alternative assessment.
- Use **BLM 10.1B Project: Encyclopedia Article** and **BLM 10.1C Project: Diagram for Encyclopedia Article** to have students write an article that might appear in a children's encyclopedia within the topic of sound and hearing. Students should include the labeled diagram of the ear along with their encyclopedia article.
- Take students to the library or provide printed or electronic resources for them to use to research sound and hearing. Show students several sample articles from children's encyclopedias for reference. Allow them to also use their student pages as a reference.
- Give students time to write their article and then, on another day, have them present it by reading it to the class.
- Direct students to follow the directions and to use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work, and then send the rubric home.

### Description of the Project

- Students should write a two-paragraph encyclopedia article on the topic of sound and hearing. They will include the diagram from BLM 10.1C with their article.
  - Students will need to label the diagram. Each item must be labeled and numbered in the order of hearing.
    - first: outer ear
    - second: middle ear
    - third: inner ear
    - fourth: auditory nerve
- Direct students to use the rubric and directions found on BLM 10.1B to guide them in their work. The rubric should be used as a checklist during the project. Each time the students complete a portion, they should check off the corresponding item on the list. This checklist will help them keep track of their progress.
- When presenting the encyclopedia article to the class, students must verbalize the correct order of the steps of hearing using the names of the labeled parts of the ear. They must also mention sound waves.

Name: \_\_\_\_\_

## Project: Encyclopedia Article

BLM 10.1B

### Directions

Write an encyclopedia article. You will need to include the following:

- Two paragraphs describing the parts of the ear and how a sound wave reaches the brain
- A diagram of the ear labeled with the outer ear, middle ear, inner ear, and auditory nerve

Share your article with the class. Point to and name the parts of the ear on your diagram. Mention, in order, the steps of hearing. Be sure to mention sound waves in your presentation.



Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

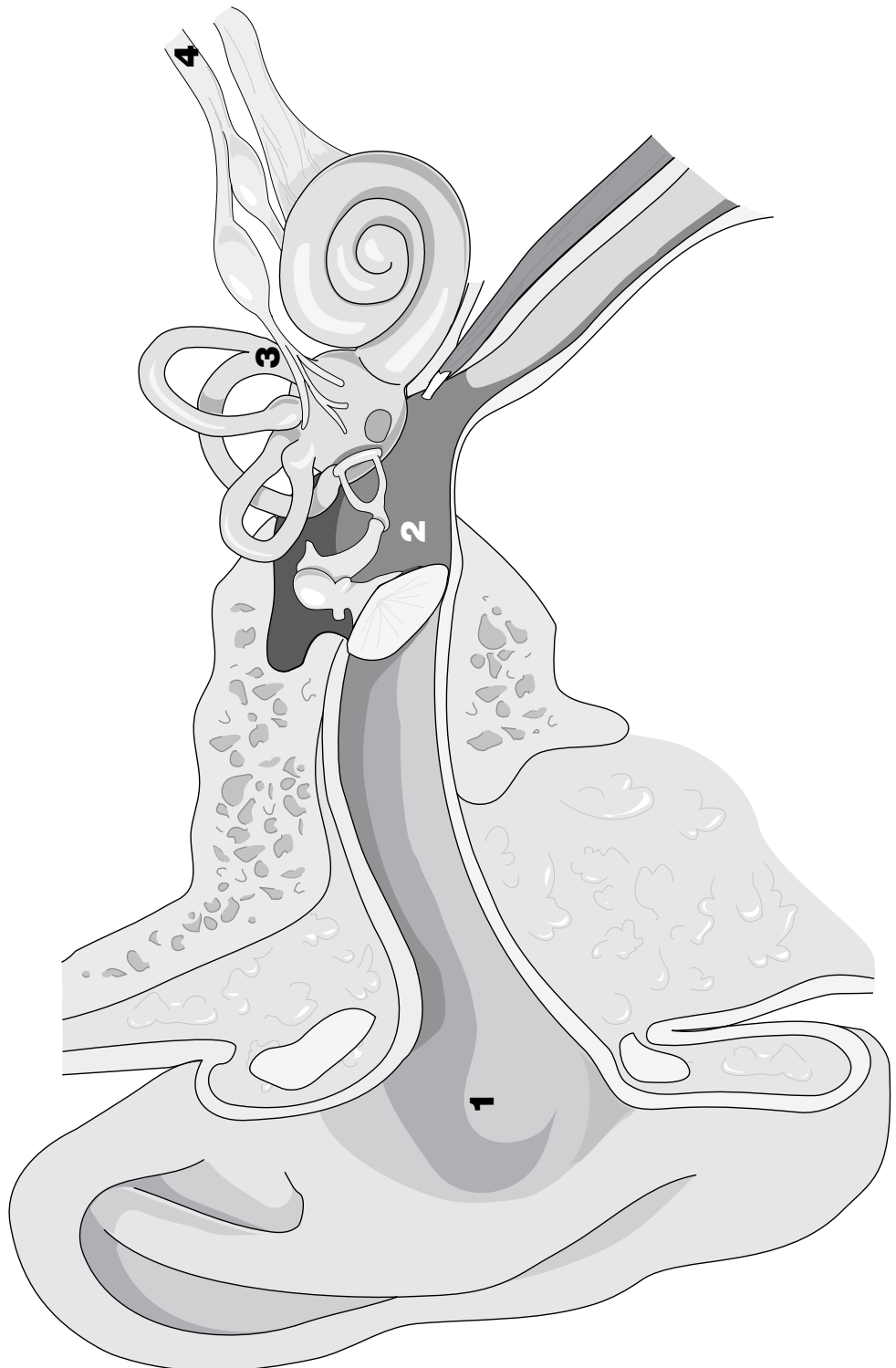
student		teacher
<input type="checkbox"/>	I wrote two paragraphs about sound and hearing.	<input type="checkbox"/>
<input type="checkbox"/>	I labeled the diagram.	<input type="checkbox"/>
<input type="checkbox"/>	I presented my article to the class.	<input type="checkbox"/>
<input type="checkbox"/>	I explained the steps of hearing and mentioned sound waves in my presentation.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**

Name: \_\_\_\_\_

**Project: Diagram for Encyclopedia Article**

**BLM 10.1C**



1.

2.

3.

4.

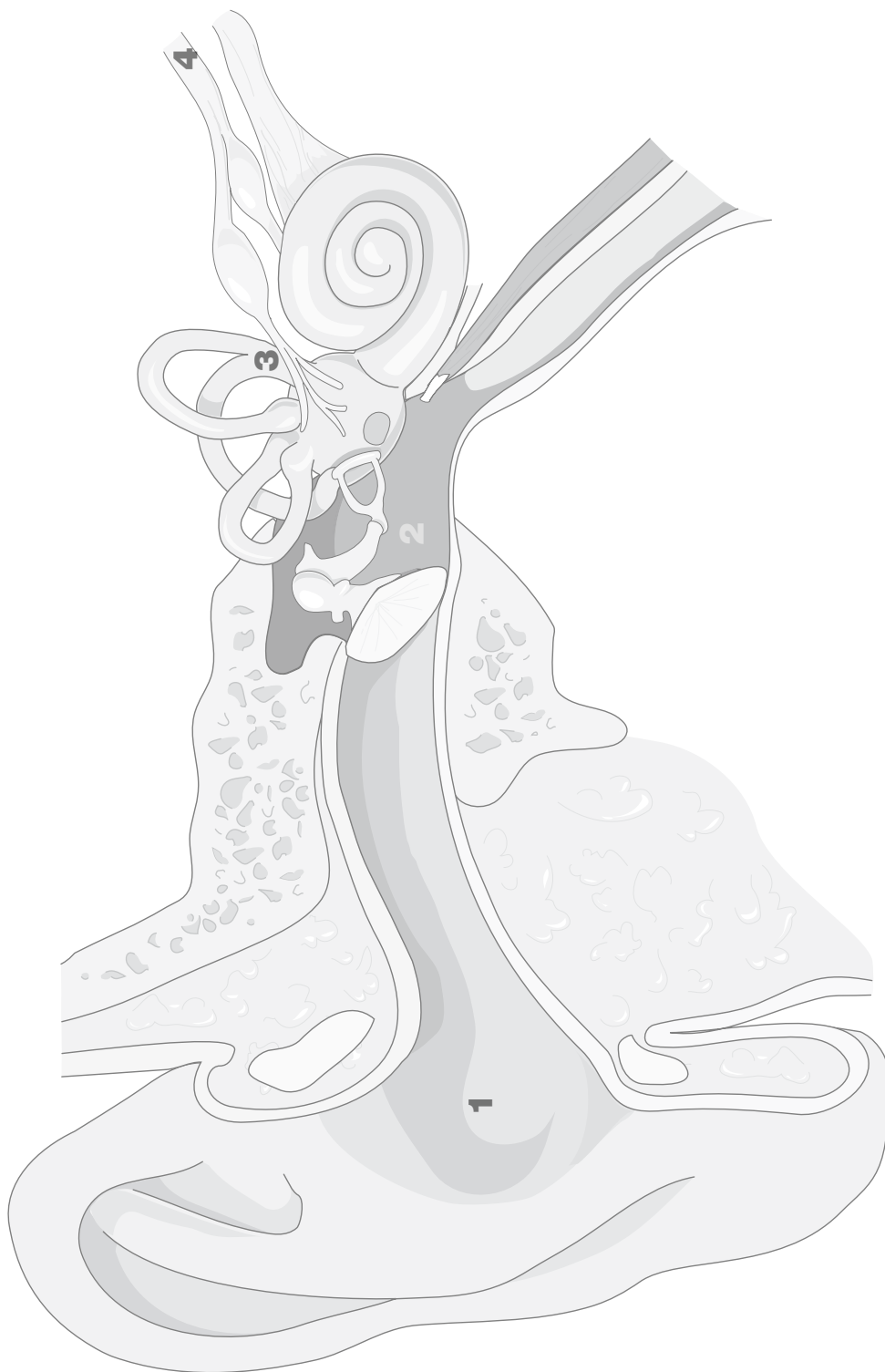


**1.** outer ear

**2.** middle ear

**3.** inner ear

**4.** auditory nerve



Name: \_\_\_\_\_

## Animal Ears

BLM 10.3A

God designed animal ears too. Can you name the animal?  
Draw a line from the picture to its name.



•

• kangaroo •

• dog •

•



•

• giraffe •

• chimpanzee •

•



•

• elephant •

• mouse •

•



•

• rabbit •

• cat •

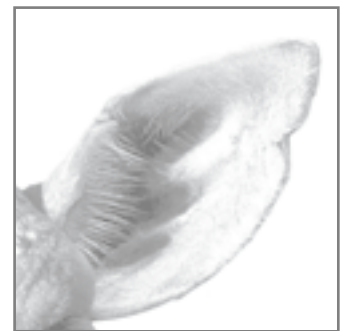
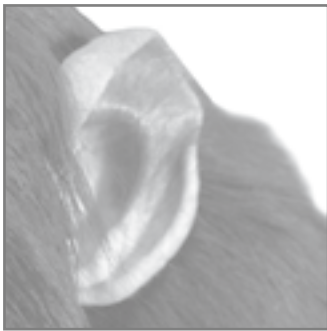
•



## Animal Ears

BLM 10.3A

God designed animal ears too. Can you name the animal?  
Draw a line from the picture to its name.

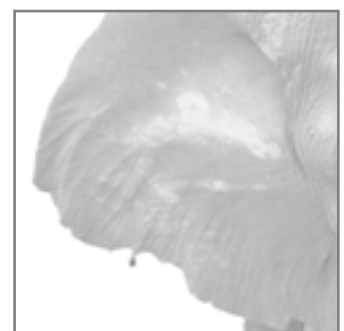
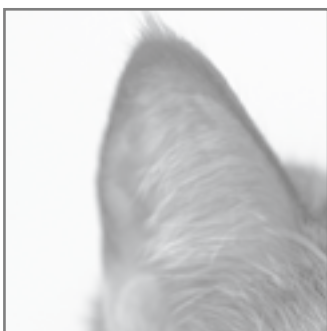


• kangaroo •

• dog •

• giraffe •

• chimpanzee •



• elephant •

• mouse •

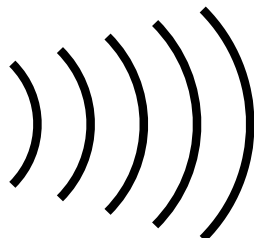
• rabbit •

• cat •



**sound wave**

Energy that moves toward the ear



**outer ear**

Guides the sound wave into the ear



**middle ear**

Vibrates and moves the sound energy to the inner ear



**inner ear**

Makes waves and moves the sound energy to the auditory nerve



**auditory nerve**

Carries the sound message to the brain



**brain**

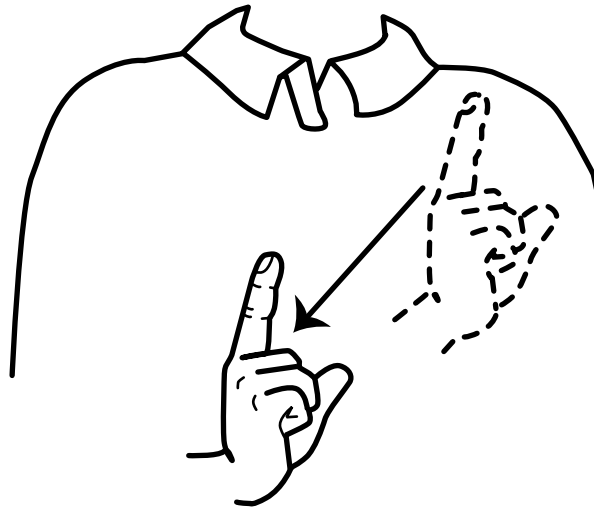
Interprets the sound message



## ***Sign Language***

**BLM 10.5A**

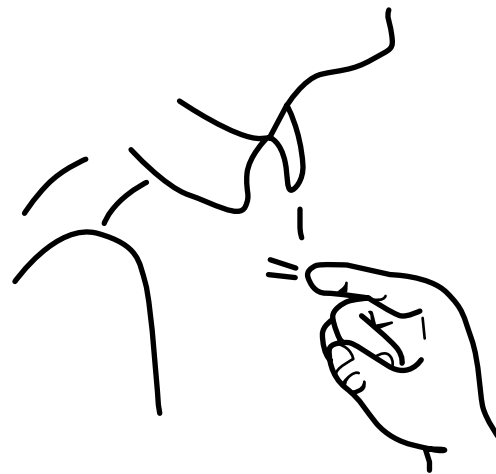
Use the following illustrations as a guide to teach “The Lord loves me” to students.



**The Lord**



**loves**



**me**

Name: \_\_\_\_\_

## Chapter 10 Test

BLM 10.7A

1. A sound wave is coming. Number the steps 1 to 5 in the order of hearing.

\_\_\_\_ middle ear      \_\_\_\_ auditory nerve      \_\_\_\_ outer ear  
\_\_\_\_ brain      \_\_\_\_ inner ear

Fill in the circle beside the correct answer.

2. The longest tube on a wind chime has the highest pitch.

☐ yes      ☐ no

3. To protect my hearing, I should listen to very loud music.

☐ yes      ☐ no

4. Hearing aids can help some people who have hearing loss.

☐ yes      ☐ no

Use the Word Bank to complete the sentences.

**Word  
Bank**

outer ear

middle ear

inner ear

5. The semicircular canals and the cochlea are in the

\_\_\_\_\_.

6. The external ear and the ear canal are in the

\_\_\_\_\_.

7. The hammer, anvil, and stirrup are bones in the

\_\_\_\_\_.

## Chapter 10 Test

## BLM 10.7A

1. A sound wave is coming. Number the steps **1** to **5** in the order of hearing.

2 middle ear                      4 auditory nerve                      1 outer ear  
5 brain                              3 inner ear

Fill in the circle beside the correct answer.

2. The longest tube on a wind chime has the highest pitch.

☐ yes                      ☒ no

3. To protect my hearing, I should listen to very loud music.

☐ yes                      ☒ no

4. Hearing aids can help some people who have hearing loss.

☒ yes                      ☐ no

Use the Word Bank to complete the sentences.

**Word  
Bank**

outer ear

middle ear

inner ear

5. The semicircular canals and the cochlea are in the

inner ear.

6. The external ear and the ear canal are in the

outer ear.

7. The hammer, anvil, and stirrup are bones in the

middle ear.

Name: \_\_\_\_\_

## Sound and Hearing Facts

BLM 10.7B

Use the Code Box to complete the sentences.

1. I use my \_\_\_\_\_ r \_\_\_\_\_ s to hear.



2. The hammer, anvil, and stirrup are parts

of the \_\_\_\_\_ d \_\_\_\_\_ l \_\_\_\_\_ ear.



3. The \_\_\_\_\_ r \_\_\_\_\_ c \_\_\_\_\_ n \_\_\_\_\_ l is part of the outer ear.



4. The auditory \_\_\_\_\_ n \_\_\_\_\_ r \_\_\_\_\_ v \_\_\_\_\_ carries the sound energy to



the brain.

5. The \_\_\_\_\_ b \_\_\_\_\_ r \_\_\_\_\_ n interprets the sound message.



6. A sound \_\_\_\_\_ w \_\_\_\_\_ v \_\_\_\_\_ travels through the air.



7. An object that \_\_\_\_\_ v \_\_\_\_\_ b \_\_\_\_\_ r \_\_\_\_\_ t \_\_\_\_\_ s faster has a



higher pitch than an object that vibrates slower.

8. Hearing \_\_\_\_\_ \_\_\_\_\_ d \_\_\_\_\_ s make sounds louder.



CODE BOX	
a =	
e =	
i =	



## Sound and Hearing Facts

BLM 10.7B

Use the Code Box to complete the sentences.

### CODE BOX

a =



e =



i =



1. I use my e a r s to hear.



2. The hammer, anvil, and stirrup are parts of the m i d d l e ear.



3. The e a r c a n a l is part of the outer ear.



4. The auditory n e r v e carries the sound energy to the brain.



5. The b r a i n interprets the sound message.



6. A sound w a v e travels through the air.



7. An object that v i b r a t e s faster has a



higher pitch than an object that vibrates slower.

8. Hearing a i d s make sounds louder.



### For the Teacher

- The following project may be started after Lesson 11.3 and completed after Lesson 11.7 as an additional activity or an alternative assessment.
- Have students use **BLM 11.1B Project: Health Booklet** to make a six-page healthy eyes and skin booklet.
- Take students to the library or provide printed or electronic resources for them to use in class. If possible, visit a pediatrician's office and pick up some real-life examples of health brochures for students to use as a reference.
- Allow students time to research, to work on their booklet, and to present their project.
- Guide students to follow the directions and to use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess their work and then send it home.

### Description of the Project

- Students should make a six-page informational booklet about keeping the eyes and the skin healthy.
- Students will need to do the following: make a cover that includes a title and a picture or drawing, write three sentences about keeping eyes healthy and two sentences about keeping skin healthy, and illustrate each sentence. Students should write one sentence on each page of the booklet and include one picture or drawing that goes with that sentence.
- Direct students to use the rubric and directions found on BLM 11.1B as a checklist during the project. Each time a portion is completed, they should check off the corresponding item on the list. This process will help them keep track of their progress.
- When they are finished, students should turn in BLM 11.1B and present their booklets to the class. The booklets may then be displayed in the classroom.

Name: \_\_\_\_\_

## **Project: Health Booklet**

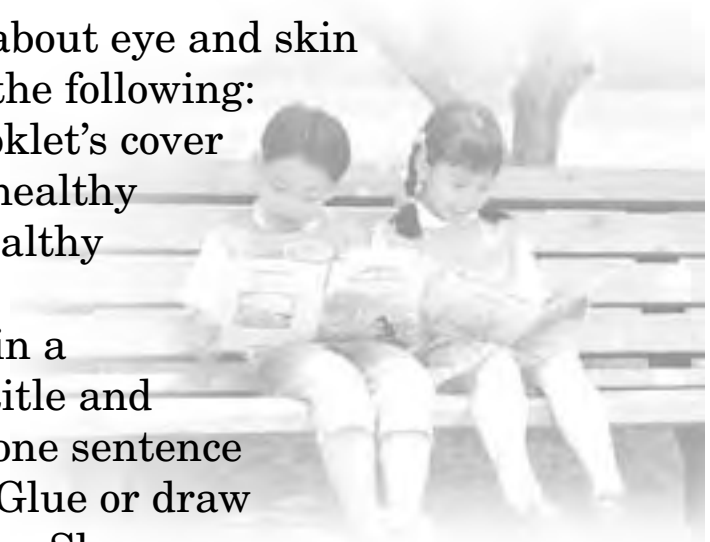
**BLM 11.1B**

### **Directions**

Make a six-page health booklet about eye and skin health. You will need to include the following:

- A title and picture for your booklet's cover
- Three ways to keep your eyes healthy
- Two ways to keep your skin healthy
- Five pictures or drawings

Arrange the information neatly in a booklet. On the cover, write the title and add a picture or drawing. Write one sentence on each of the remaining pages. Glue or draw a picture to go with each sentence. Share your booklet with the class.



Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

<b>student</b>		<b>teacher</b>
<input type="checkbox"/>	My cover has a title and a picture.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote three sentences about eyes.	<input type="checkbox"/>
<input type="checkbox"/>	I wrote two sentences about skin.	<input type="checkbox"/>
<input type="checkbox"/>	I included three pictures of eyes.	<input type="checkbox"/>
<input type="checkbox"/>	I included two pictures of skin.	<input type="checkbox"/>
	Total	<input type="checkbox"/>

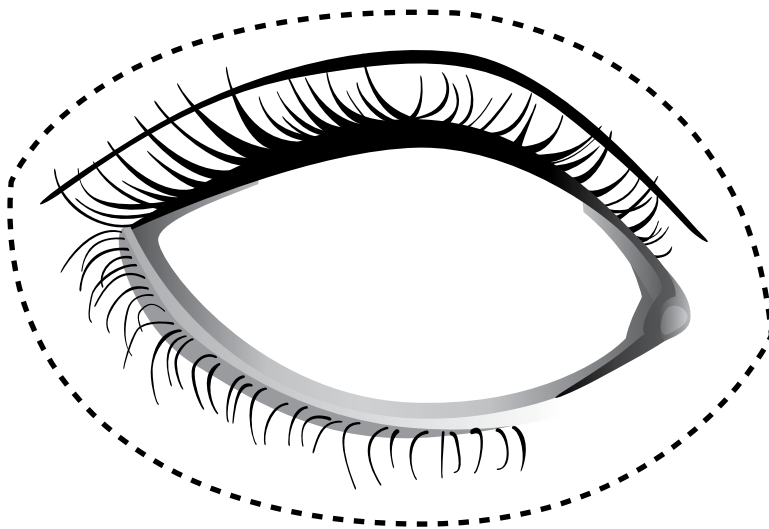
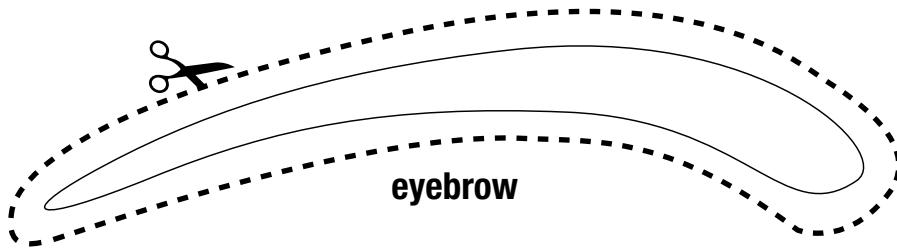
**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work

**Teacher Comments:**

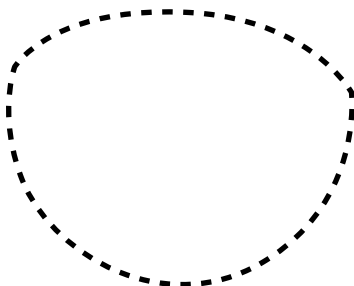
## Eye

## BLM 11.1C

Color the eyelid and eyelashes, iris, and eyebrow. Cut out the parts of the eye and glue them onto a piece of paper. Label each part.



eyelid and eyelashes



iris



pupil

<b>orange</b>	
<b>red</b>	
<b>yellow</b>	
<b>green</b>	
<b>blue</b>	

Which colors were the easiest to sort in dim light?  
Which were the hardest to sort in dim light?

<b>orange</b>	
<b>red</b>	
<b>yellow</b>	
<b>green</b>	
<b>blue</b>	

Which colors were the easiest to sort in dim light? **yellow, orange**

Which were the hardest to sort in dim light? **blue, green, red**

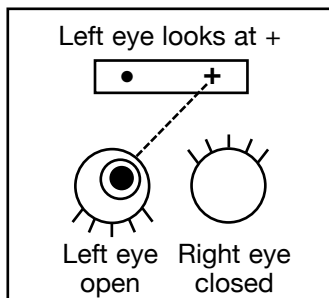
Name: \_\_\_\_\_

## Blind Spot

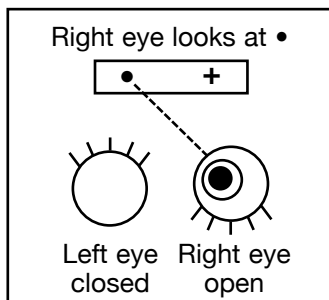
BLM 11.3A

Did you know that you have a blind spot? The blind spot is an area on the retina that does not have any receptors that respond to light. Without these receptors, you cannot see an image.

To find your blind spot, cut out the tester at the bottom of the page and follow the directions.



1. Hold the tester at arm's length from your face.
2. Close your right eye and look at the + with your left eye.



3. Slowly bring the tester closer while looking at the +. At a certain distance, the • will disappear. This is when the • falls on the blind spot of your retina.
4. Try it with your other eye. Close your left eye and look at the • with your right eye. Move the tester closer and the + will disappear.





sentences	Helen Keller used her fingers to read ____.	The outer layer of the skin is called the ____.	A substance called ____ gives skin its color.
	Rods allow your eyes to see ____ and shadows.	A person who is color-blind could have trouble seeing certain ____.	Drink plenty of ____ every day to keep your skin healthy.
answers	epidermis	braille	shapes
	colors	water	melanin





sentences	The _____ in your eyes allow you to see colors.	The opening in the center of your iris is called the _____.	_____ keep your eyes moist.
	An eye doctor can give you an eye _____.	Sweat is released through _____ to help keep the body cool.	Wear _____ to protect your eyes from the sun.
answers	exam	cones	pores
	sunglasses	tears	pupil



sentences	A tool an eye doctor uses to check your vision is an _____.	The _____ focuses light in the eye.	The optic nerve sends a visual message to the _____.
	The skin can tell you how things _____.	Your sense of _____ tells you if something feels rough or smooth.	Blood vessels, nerves, and pores are parts of the _____.
answers	touch	eye chart	feel
	skin	brain	lens

## Game Board

BLM 11.8D

### Rules:

1. Correctly match the missing word to the sentence to move forward 2 spaces.
2. Each player may match one missing word per turn.
3. The first player to reach the finish wins.



Name: \_\_\_\_\_

## Chapter 11 Test

BLM 11.8E

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	green	iris	brain
	glasses	cones	braille

1. The \_\_\_\_\_ is the colored part of the eye.
2. Rods help you see shapes and shadows, and  
\_\_\_\_\_ help you see color.
3. People who are nearsighted or farsighted can wear  
\_\_\_\_\_ to see more clearly.
4. Nerves in the skin send messages to the  
\_\_\_\_\_ to let you know how something feels.
5. A person with color blindness may have trouble seeing red and  
\_\_\_\_\_.
6. Helen Keller used \_\_\_\_\_, an alphabet made of  
raised dots, to read and write.

Circle the things that can help your eyes and skin stay healthy.



## Chapter 11 Test

BLM 11.8E

Use the Word Bank to complete the sentences.

<b>Word Bank</b>	green glasses	iris cones	brain braille
------------------	------------------	---------------	------------------

1. The \_\_\_\_\_ **iris** \_\_\_\_\_ is the colored part of the eye.
2. Rods help you see shapes and shadows, and  
\_\_\_\_\_ **cones** \_\_\_\_\_ help you see color.
3. People who are nearsighted or farsighted can wear  
\_\_\_\_\_ **glasses** \_\_\_\_\_ to see more clearly.
4. Nerves in the skin send messages to the  
\_\_\_\_\_ **brain** \_\_\_\_\_ to let you know how something feels.
5. A person with color blindness may have trouble seeing red and  
\_\_\_\_\_ **green** \_\_\_\_\_.
6. Helen Keller used \_\_\_\_\_ **braille** \_\_\_\_\_, an alphabet made of raised dots, to read and write.

Circle the things that can help your eyes and skin stay healthy.



Name: \_\_\_\_\_

## ***Sight and Touch Facts***

**BLM 11.8F**

Complete the crossword puzzle.



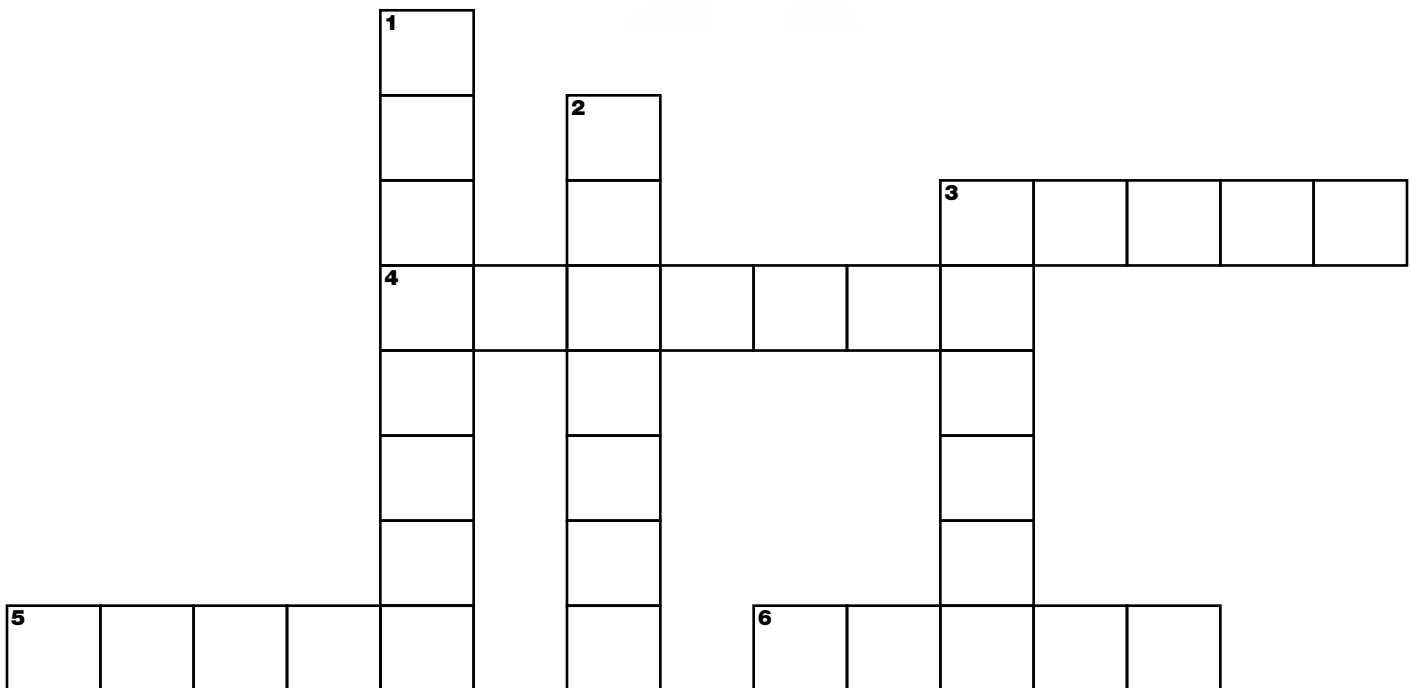
***Puzzle Words***

rough  
focus

braille  
eyebrows

glasses  
retina

brain



### **Across**

- 3** Your skin has nerve endings that tell your brain if something is smooth or \_\_\_\_.
- 4** Helen Keller could read because of \_\_\_\_.
- 5** The lens allows the eye to \_\_\_\_.
- 6** The optic nerve takes the messages to the \_\_\_\_.

### **Down**

- 1** The \_\_\_\_ protect the eyes from bright, overhead lights.
- 2** An eye doctor can fit you with \_\_\_\_.
- 3** The part of the eye that has rods and cones is the \_\_\_\_.

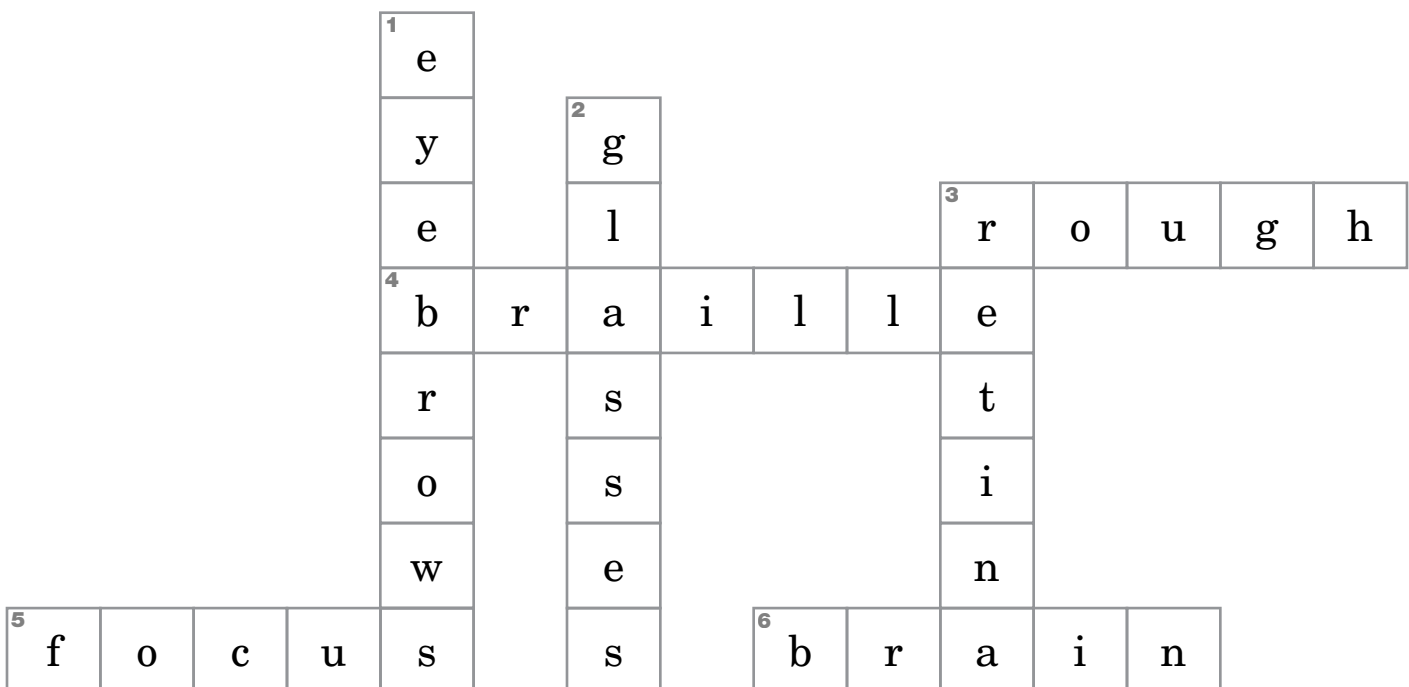
## Sight and Touch Facts

BLM 11.8F

Complete the crossword puzzle.



Puzzle Words	rough	braille	glasses	brain
	focus	eyebrows	retina	



### Across

- 3** Your skin has nerve endings that tell your brain if something is smooth or \_\_\_\_.
- 4** Helen Keller could read because of \_\_\_\_.
- 5** The lens allows the eye to \_\_\_\_.
- 6** The optic nerve takes the messages to the \_\_\_\_.

### Down

- 1** The \_\_\_\_ protect the eyes from bright, overhead lights.
- 2** An eye doctor can fit you with \_\_\_\_.
- 3** The part of the eye that has rods and cones is the \_\_\_\_.

### **For the Teacher**

- The following project can be used at any time during the chapter as an additional activity or an alternative assessment.
- Use **BLM 12.1B Project: Taste and Smell Booklet** and have students make a booklet about their senses of taste and smell.
- This project can be completed in class or as a homework assignment.
- Plan to allow time for students to present their project at the end of Chapter 12 Taste and Smell.
- Guide students to follow the directions and to use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess each student's work and then send the rubric home with the booklet.

### **Description of the Project**

- Students should make a booklet about their senses of taste and smell.
- Students will need to do the following: staple or tape together several sheets of lined paper, design a cover on construction paper, and write or draw to complete each page as directed on the rubric.
- Direct students to use the rubric and directions found on BLM 12.1B to guide them in their work. Students should use the rubric as a checklist during the project. Each time a portion has been completed, they should check off the corresponding item on the list. The checklist will help them keep track of their progress.
- When they have finished, students should turn in BLM 12.1B and present their booklet to the class. The booklet may then be sent home with the grading rubric.



Name: \_\_\_\_\_

## **Project: Taste and Smell Booklet**

**BLM 12.1B**

### **Directions**

Make a booklet about your senses of taste and smell. You need to do the following:

- Assemble your booklet.
- Design a cover.
- Draw your tongue and nose and then write a sentence about each.
- Write about what you like and do not like to taste and smell.
- Write two sentences thanking God for your sense of taste and sense of smell.

Assemble your booklet from pieces of lined paper. Write at least one sentence and include at least one picture on each page. Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!



















<b>student</b>		<b>teacher</b>	
<input type="checkbox"/>	I designed a cover.	<input type="checkbox"/>	
<input type="checkbox"/>	I drew my tongue and wrote about it.	<input type="checkbox"/>	
<input type="checkbox"/>	I drew my nose and wrote about it.	<input type="checkbox"/>	
<input type="checkbox"/>	I wrote about what I like and do not like to taste and smell.	<input type="checkbox"/>	
<input type="checkbox"/>	I wrote at least two sentences thanking God for my senses of taste and smell.	<input type="checkbox"/>	
	Total	<input type="checkbox"/>	

**Scoring Guide:** 4 Excellent   3 Well done   2 Good   1 Needs work  
**Teacher Comments:**

Name: \_\_\_\_\_

**Taste Chart**

**BLM 12.1C**

food	like	dislike	taste
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory
<div></div> <div></div> <div></div>			salty sweet sour bitter savory

Name: \_\_\_\_\_

## **Nose**

**BLM 12.4A**

Cut out the words and glue them in the correct box.

The nose has two openings called \_\_\_\_.

Part of the nose is flexible because it is made of \_\_\_\_.

The nose makes \_\_\_\_ to filter the air.

The nose helps people \_\_\_\_ and smell.



**breathe**

**nostrils**

**mucus**

**cartilage**

## ***Nose***

**BLM 12.4A**

Cut out the words and glue them in the correct box.

The nose has two openings  
called \_\_\_\_\_.

**nostrils**

Part of the nose is flexible  
because it is made of \_\_\_\_\_.

**cartilage**

The nose makes \_\_\_\_\_ to  
filter the air.

**mucus**

The nose helps people  
\_\_\_\_\_ and smell.

**breathe**

Name: \_\_\_\_\_

## Survey

BLM 12.6A

List the group members' names on the lines. Add one more taste item and one more smell item to the circle charts. Survey your group members and record their likes and dislikes. Draw a happy face if they like a food and a sad face if they dislike it.

**taste**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

	lemon	pickle	cookie	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
total likes				
total dislikes				

**smell**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

	vinegar	perfume	bubble gum	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
total likes				
total dislikes				

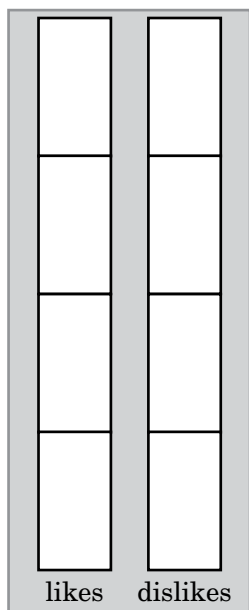
Name: \_\_\_\_\_

## Bar Graph

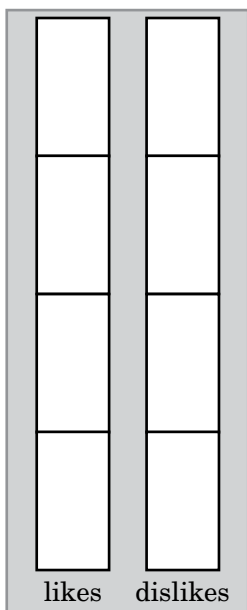
BLM 12.6B

For each taste or smell, color the bars red to show the number of people who liked each food. Color the bars blue to show the number of dislikes. Be sure to list the additional food or smell you used.

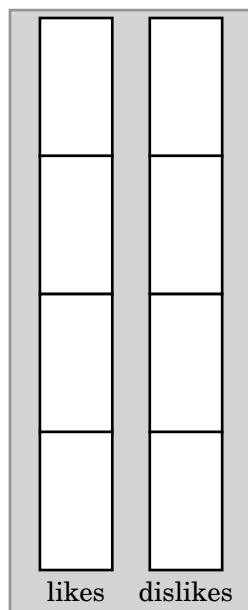
**T  
A  
S  
T  
E  
S**



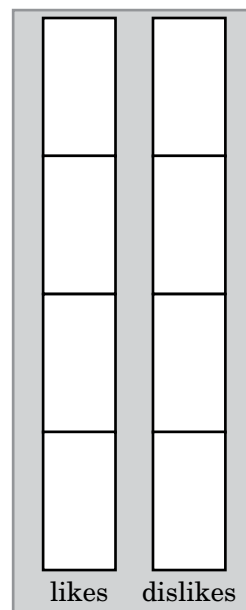
lemon



pickle



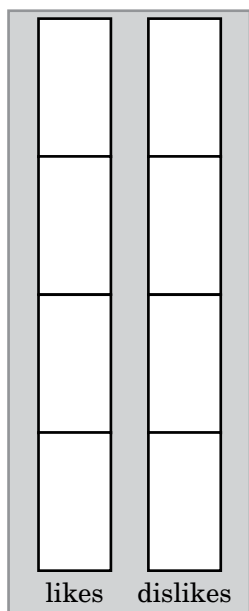
cookie



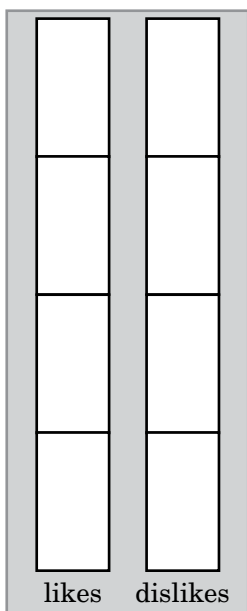
\_\_\_\_\_

.....

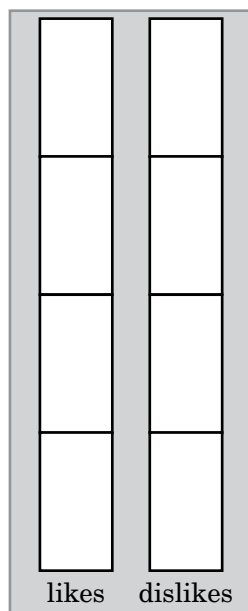
**S  
M  
E  
L  
L  
S**



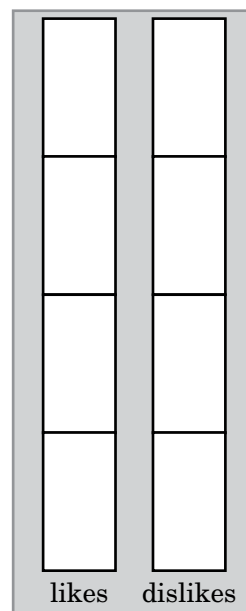
vinegar



perfume



bubble gum



\_\_\_\_\_

Name: \_\_\_\_\_

## Chapter 12 Test

BLM 12.7A

Fill in the circle beside the word that best completes the sentences.

1. Taste buds are found on the \_\_\_\_\_.  
☐ teeth                      ☐ nose                      ☐ tongue
2. The two openings in the nose are called \_\_\_\_\_.  
☐ taste buds              ☐ nostrils              ☐ mucus
3. \_\_\_\_\_ your hands to avoid spreading germs.  
☐ Wash                      ☐ Touch                      ☐ Wave
4. Nose hairs and mucus keep \_\_\_\_\_ from entering the lungs.  
☐ air                      ☐ nostrils              ☐ dust
5. The five tastes that you can sense are sweet, sour, salty, bitter, and \_\_\_\_\_.  
☐ cold                      ☐ savory                      ☐ fishy
6. God designed the senses to give you pleasure and to \_\_\_\_\_ you.  
☐ hurt                      ☐ scare                      ☐ protect

7. Draw a line from the taste to the food.

sweet

•

savory

•

sour

•

salty

•

bitter

•

•

potato chip

•

cookie

•

black coffee

•

lemon

•

mushroom

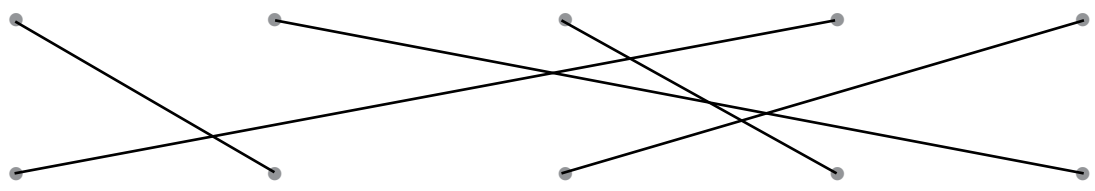


## Chapter 12 Test

## BLM 12.7A

Fill in the circle beside the word that best completes the sentences.

1. Taste buds are found on the \_\_\_\_\_.  
☐ teeth      ☐ nose      ☒ tongue
2. The two openings in the nose are called \_\_\_\_\_.  
☐ taste buds      ☒ nostrils      ☐ mucus
3. \_\_\_\_\_ your hands to avoid spreading germs.  
☒ Wash      ☐ Touch      ☐ Wave
4. Nose hairs and mucus keep \_\_\_\_\_ from entering the lungs.  
☐ air      ☐ nostrils      ☒ dust
5. The five tastes that you can sense are sweet, sour, salty, bitter, and \_\_\_\_\_.  
☐ cold      ☒ savory      ☐ fishy
6. God designed the senses to give you pleasure and to \_\_\_\_\_ you.  
☐ hurt      ☐ scare      ☒ protect
7. Draw a line from the taste to the food.

sweet	savory	sour	salty	bitter
•	•	•	•	•
				
potato chip	cookie	black coffee	lemon	mushroom

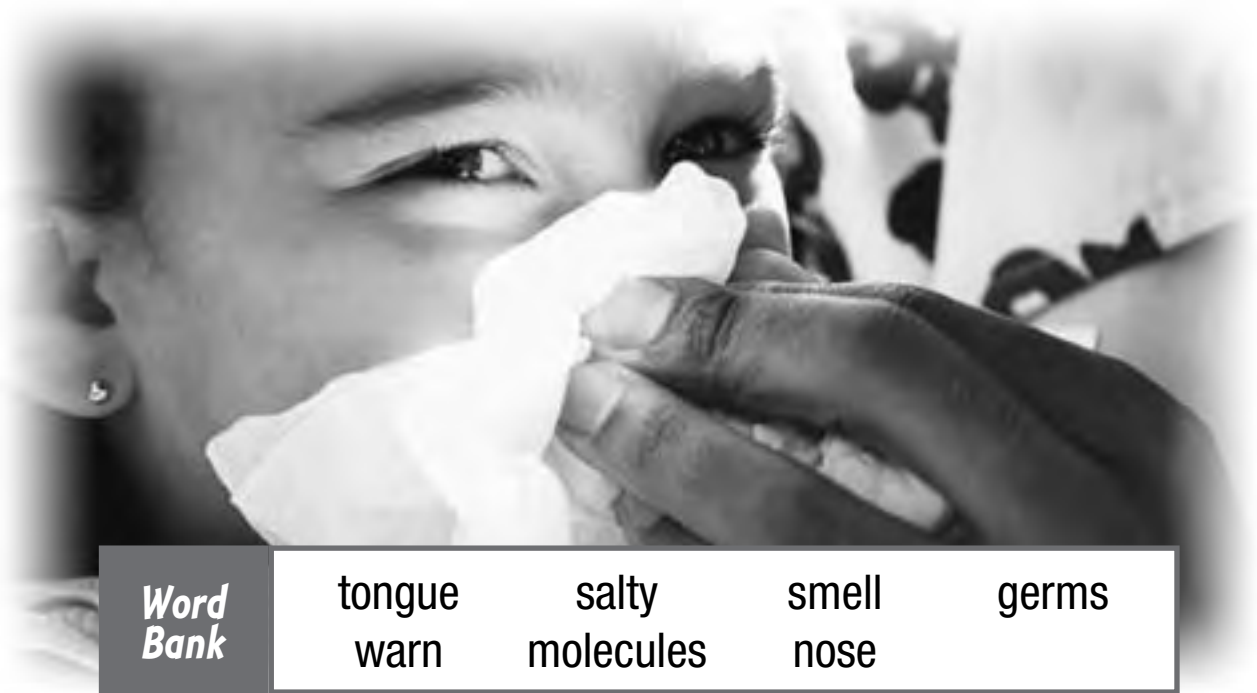




Name: \_\_\_\_\_

## ***Taste and Smell Facts***

**BLM 12.7B**



**Word  
Bank**

tongue  
warn

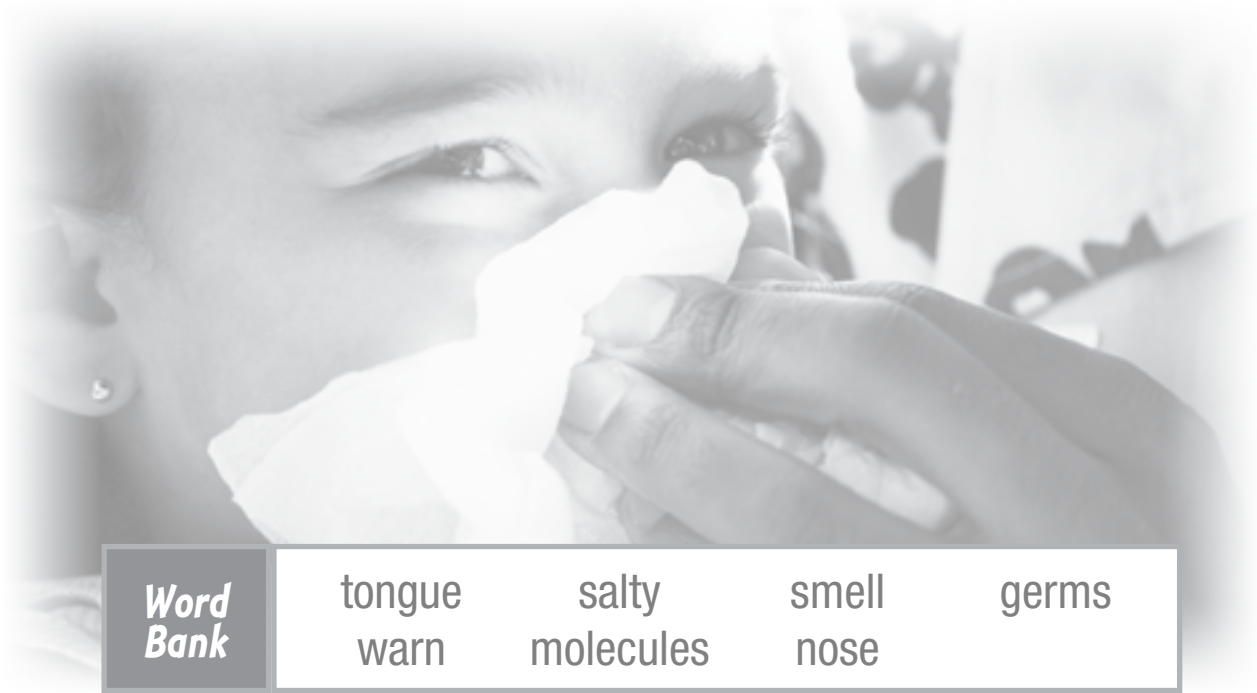
salty  
molecules

smell  
nose

germs

Use the Word Bank to complete the sentences.

- 1.** Your nose helps you \_\_\_\_\_.
- 2.** You should wash your hands to avoid spreading  
\_\_\_\_\_.
- 3.** Potato chips taste \_\_\_\_\_.
- 4.** Your sense of smell can \_\_\_\_\_ you  
of danger.
- 5.** Your \_\_\_\_\_ helps you speak clearly.
- 6.** You smell things because \_\_\_\_\_ travel  
through the air. They are breathed in through your nose.
- 7.** Cartilage makes your \_\_\_\_\_ flexible.

**Word  
Bank**tongue  
warnsalty  
moleculessmell  
nose

germs

Use the Word Bank to complete the sentences.

1. Your nose helps you \_\_\_\_\_ **smell** \_\_\_\_\_.
2. You should wash your hands to avoid spreading  
\_\_\_\_\_ **germs** \_\_\_\_\_.
3. Potato chips taste \_\_\_\_\_ **salty** \_\_\_\_\_.
4. Your sense of smell can \_\_\_\_\_ **warn** \_\_\_\_\_ you  
of danger.
5. Your \_\_\_\_\_ **tongue** \_\_\_\_\_ helps you speak clearly.
6. You smell things because \_\_\_\_\_ **molecules** \_\_\_\_\_ travel  
through the air. They are breathed in through your nose.
7. Cartilage makes your \_\_\_\_\_ **nose** \_\_\_\_\_ flexible.