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## UNIT 2: Living Things Communicate

Name:

# How Animals Share Information

Animals use different senses when they share information. When a cat rubs up against your leg, it is **sharing information**. It is communicating. What do you think the cat could be trying to tell you?

Some animals communicate with *sound*:

- The wolves in a pack howl to one another.
- Birds chirp and sing.
- Frogs hear one another croak.
- Humans can communicate by talking.

*Smell* is important in many animals' communication:

- Snakes pick up smells with their tongues.
- Wolves, deer, and elephants make smells so their families can find them. Fish and ants can put out a smell that tells others that danger is near.



Ants communicating with touch



Wolf howling

Some animals share information through *touch*:

- Elephant mothers touch their babies with their trunks to calm them.
- Ants touch their antennae together. This sends messages.
- **1.** What is another way to say *share information*?
  - a. eat together b. communicate

c. trade games

**2.** Explain two ways that animals communicate that you read about in the passage.

3. Write about one way that you communicate with your friends or family.

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## UNIT 5: Biomes and Ecosystems

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

## Ecosystems

Each biome has different ecosystems in it. An **ecosystem** includes all the living and nonliving things in an area.

Here are two different kinds of ecosystems in the **forest** biome:

## Rainforests

Rainforests get lots and lots of rain. The temperature is warm all the time. More kinds of plants and animals live in rainforest ecosystems than in any other ecosystems in the world. Animals such as toucans and sloths live in rainforests. Most rainforests are found along the equator. This means they get lots of sunlight all year long.





## **Deciduous Forests**

Deciduous forests have warm summers and cold winters with lots of snow. **Deciduous** means the tree leaves fall off in the winter. The leaves grow back in the spring when it gets warmer. Deer, squirrels, and woodpeckers live in these forests.

 Black bears eat a lot of food over the summer and fall. They get very fat. During the winter, they hibernate. They go into their dens and sleep until it gets warmer in the spring.



Are black bears more likely to live in a rainforest or a deciduous forest?

Rainforest Deciduous Forest

Why? \_\_\_\_\_

2. Boa constrictors are large snakes. They live in trees. They are **cold-blooded** animals, which means they cannot make their own heat.

Are boa constrictors more likely to live in a rainforest or a deciduous forest? **Rainforest Deciduous Forest** 

\_\_\_\_\_



Why? \_\_\_\_\_

Name:

# Fun with Forecasting

Today, scientists use computers and other tools to predict the weather. How did people know about the weather in the past? Here are some fun ways to check the weather.

- Check the pinecones. Pine seeds travel in the wind. On days when it is foggy or rainy, pinecones close up tight. If you see tightly closed pinecones, expect wet weather. When the air is dry, pinecones open up so their seeds can come out. This means the weather will be nicer.
- Look at the flowers. At night, dandelion flowers close their petals. They usually open up in the morning, but if it is going to rain, they stay closed. This keeps the pollen inside the flower from washing away. If you see closed dandelion flowers, you should probably grab an umbrella.
- Listen to the crickets. Have you heard crickets chirp? Try counting the chirps! Count the number of chirps from one cricket in 15 seconds. Then, add 37. The number you get will be the temperature!







- 1. If you see closed dandelion flowers in the morning, what could that mean?
  a. rainy weather
  b. sunny weather
  c. dry weather
- 2. How can you use pinecones to see what the weather will be like?

**3** If you listened to a cricket and counted 43 chirps in 15 seconds, what would the temperature be? Do the math here.

## UNIT 19: Laws of Motion

Name:

# Newton's Second Law of Motion

Newton's second law of motion is about *how much force* is needed to move something. The law explains that you need more force to move things with more mass.

Things with more mass are harder to move. Your backpack is harder to lift when it has more books in it.

**Think about it:** Would it be harder to pull an empty wagon or a wagon with a baby elephant in it?





You would need to use a lot more force to move the wagon with the elephant.
 Why? Because it has more mass.

You also know that the more force you apply to something, the faster it will move. Let's say you gave the baby elephant's wagon a push and it moved slowly. What would happen if five of your friends helped you push?

That would put more force on the wagon, and it would move faster.

- 1. Which would you need the most force to move?
  - a. a frog in a wagon
  - **b.** a dog in a wagon
  - c. a hippo in a wagon
- If you wanted to kick a ball from one end of a field to the other, would you kick it very softly?
   Yes No

Why, or why not? \_\_\_\_\_

**3.** If you were to push a soccer ball and a bowling ball with the same amount of force, which would move faster?

Why? \_\_\_\_\_

## UNIT 20: About Science

Name:

# Interpreting Data

When scientists do an experiment, they observe what happens and write it down. The information they write down is called **data**. Scientists look at the data after an experiment. They use the data to try to answer the question they were testing.

Cass and George want to know what kind of liquid melts an ice cube the fastest. They get four different liquids. They pour each one into a separate cup. They drop an ice cube into each cup. All ice cubes started out the same size. After two minutes, they take the ice cubes out of the liquids. They measure the length of each ice cube.

Here is the	vir data:		Liquid	Length of Ice Cube
			water	2 cm
			juice	5 cm
			soda	4 cm
			milk	4 cm

1. Finish the graph to show the results of this experiment. Use the *data* from the table above.



Which liquid made the ice cube melt the fastest?

How do you know? \_\_\_\_\_

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What is your evidence? \_\_\_\_\_