

Warm-Up

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Name \_\_\_\_\_

## Animal Messages

Animals have their own methods of communication. You'll notice them if you pay attention and learn the languages.

Many animals use color-coding to send messages. The bright orange colors on a ladybug, a cinnabar caterpillar, and the monarch butterfly tell some predators that the insect tastes bad. A toad may snap up one ladybug on its tongue and start to swallow it before it comes flying out. It won't strike at a second ladybug. Some butterflies and other insects show the colors of these awful-tasting insects. Peacocks, robins, frigate birds, and many other male birds will display their colorful chests as a way of attracting a female mate.

A female silkworm moth will release a scent when it is ready to mate. Many moths use this perfume signal. Male crickets and grasshoppers attract mates by rubbing the legs and wings together to make an attractive chirping sound. This is called *stridulation*.

Honeybees do a figure-eight "waggle dance" in the air to indicate where food may be found. Dominant wolves and dogs in a group have their ears up and teeth bared to indicate strength. Less powerful animals keep their ears flat and crouch or roll over on their backs. Skunks may send the most obvious message. A skunk will stamp its feet and raise its tail to warn enemies to leave it alone. Can you think of other kinds of messages that animals send?

## Check Your Understanding

- Which word refers to an insect rubbing its legs and wings together?
  - frigate
  - waggle
  - stridulation
  - display
- What message does a "waggle dance" send?
  - the location of the hive
  - the location of food
  - the location of a new queen
  - the location of humans
- How do toads, frogs, birds, and other creatures learn to *not* eat ladybugs and monarch butterflies?
  - Their speed warns them.
  - Their color warns them.
  - Their taste warns them.
  - both b and c
- What can you infer from reading the passage?
  - Ladybugs probably don't taste good to many predators.
  - Many animals would rather warn their enemies than fight.
  - Many animals can communicate without thinking.
  - all of the above

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Warm-Up

Name \_\_\_\_\_

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## The Human Brain

Your brain is the command center for almost all of your activities—thinking, moving, and breathing. It coordinates the different parts of your body. Your brain holds more information right now than a million full sets of encyclopedias. Most of the information relates to your life, your body, your experiences, and what you’ve learned.

Your brain looks like a large, gray, wrinkled walnut. It consists of over ten billion connected nerve cells. There are three main parts of the human brain. The largest and most important part is the cerebrum, which controls the senses, feelings, and thinking aspects of your life, as well as memory and speech. Most of the work you do in school involves this part of the brain. The cerebrum

also controls the cerebellum, the part of the brain responsible for muscle use, coordination, and balance in the body. The brain stem controls functions such as breathing and heartbeat.

Your brain has two sides called **hemispheres**. They control different actions and the opposite sides of the body. In right-handed people, the left side of the brain controls speech, language, and logical thought. The right side specializes in recognizing objects, controlling emotions, and creative ideas. In left-handed people, these roles are reversed. Protect your brain. You need it for a lifetime!

## Check Your Understanding

- Which of the following is the best topic sentence in the passage?
  - paragraph one, first sentence
  - paragraph one, last sentence
  - paragraph two, first sentence
  - paragraph two, last sentence
- From the context of the passage, what is a **hemisphere**?
  - the top of the brain
  - the bottom of the brain
  - one side of the brain
  - the cerebrum
- If you are left-handed, which side of the brain controls your speech, language, and thought?
  - the right side
  - the left side
  - the cerebrum
  - the cerebellum
- Which of the following is *not* a main part of the brain?
  - cerebrum
  - cerebellum
  - brain stem
  - skull



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