

How Do We Transfer Information?



Activity 8

Analyze Like a Scientist

Transferring Information

We use our senses of sight, touch, taste, hearing, and smell to collect information about the world around us. The senses can also be used to communicate, or share information, with others. Imagine your friend is smiling at you. Which sense do you use to understand they are happy? **Read** the text. As you read, **highlight** anything you do not understand with a blue highlighter and anything you find interesting with a yellow highlighter.

Transferring Information

Your sense organs collect information about your environment and send it to your brain. Examples include your ears detecting sound energy and your eyes using light energy to gather information. For a moment, think about all the different kinds of information that you receive through your eyes. Your eyes detect light. This means they can detect signals that travel very fast over different distances, such as your friend waving from across a room, a traffic signal, or a rescue flare. In the past, people used signal fires to communicate over distances of many kilometers. Many backcountry hikers carry mirrors that they can flash to attract the attention of pilots of rescue helicopters.

Humans use signals or codes to transmit information. They can be as simple as a thumbs-up or thumbs-down, or a red or a green traffic light. Expressions on our faces are coded signals that can help people predict what we are thinking or whether we feel happy or sad. Language is a code in sound. Different languages are different codes, but they all enable the transfer of information. Writing is a **code** that uses symbols. A code is a pattern that has meaning, such as the arrangement of letters in a word. Music or sound can be used to communicate messages. Lighthouses encode information in flashes of light that tell sailors where they are. When sense organs receive this information and send messages to the brain, the brain decodes and interprets the meaning.



Traffic Signals



Activity 9

Evaluate Like a Scientist

Review:

Communication and Information Transfer

Think about what you have learned so far in this concept about how humans and other animals communicate. Animals use a variety of ways to communicate, and humans have a much more complex system of communication. As you review this concept, use the space provided to **summarize** your learning. **Explain** the similarities and differences between how humans and animals communicate. If you have additional questions about communication systems, **write** them here and **share** these with your teacher and classmates.



Talk Together How does your new understanding of communication systems help you better understand bats? Talk to your partner about how you can use your knowledge of adaptations, senses, and communication to get ready for the Unit Project.