

## Sound is change. Sound is energy.



## **Sound Is Energy**

Energy is moving around you all the time—energy in the form of **sound waves**. Sound waves are everywhere. Even on the quietest night you can hear sounds. Close your eyes, hold very still, and listen for a moment. How many different sounds can you hear?

**Sound** is a special kind of kinetic, or motion, energy. Sound is energy vibrating through substances. All sounds are caused by **vibrations**—the back-and-forth motion of molecules. The molecules collide with each other and pass on energy as a moving wave.

Sound waves can travel through gases, liquids, and solids. The sounds you hear are usually moving through air. When a sound wave moves through air, the air molecules vibrate back and forth in the same direction as the sound. The vibrations push the air molecules close together, then pull them apart.

## **Discussion Questions**

- 1. How do the things in the pictures (on page 14) make sound?
- 2. How is sound important to us? (communication, music, entertainment)
- 3. What makes some sounds pleasant and some unpleasant? (pitch, volume, personal choice)
- 4. How does your throat make sounds? (The muscles in your chest push air past your vocal cords, making them vibrate.)

## Activities

- 1. Have the students feel their throats while humming to feel the vibrations.
- 2. Have the students explore the range of sounds they can make with their voices.
- 3. Have the students tap different objects with a pencil and notice the difference in the sounds.