



A vibrating rubber band

clap of thunder, the rustle of dry leaves, the splash of water, the howling of wind, and the screech of a rusty hinge are only a few of the many sources of sound. All these sources involve the movement of some material.

A very special kind of movement is required to produce sound. At a suitable time, you can investigate this special kind of movement. Place your fingers on your throat, and hum. Do you feel the very rapid quiver of your vibrating vocal cords? Stretch a rubber band and pluck it. You should be able to see the movement that produces the sound you hear. Hold a ruler securely over the edge of a table. Pluck the end

of the ruler, and notice its rapid movement that produces sound. Lower a vibrating fork into still water. What evidence of rapid motion do you see?

From these observations, what conclusions can you make about the source of sound? Sound is produced by objects in motion. That motion is so rapid that it is blurred. The motion is back-and-forth motion. *Vibration* is the name for the very rapid back-and-forth motion. Each complete back-and-forth movement is called one vibration. An object that is producing sound may be vibrating several hundred or even thousand vibrations per second. In fact, the source of all sound is vibrating objects.

Study Exercises: Group A

1. Man uses sound mainly for c_____.
2. What part does sound have in a person's coming to faith in Jesus Christ?
3. What two provisions has God given to man so that he can communicate with sound?
4. What is the source of sound?
5. Vibration can be defined as _____ back-and-forth _____.
6. What characteristic of vibration can be observed by the sense of touch?
7. What characteristic of vibration can be observed by the sense of sight?