# **Hearing Your Heartbeat**

#### **Source of Sound**

Name the source of each sound. What was vibrating?



| a) | a)  |  |
|----|-----|--|
|    | · — |  |

| b) |   |  |
|----|---|--|
|    | • |  |

| c) |  |
|----|--|
| ,  |  |

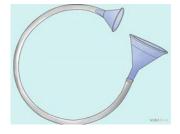
d) \_\_\_\_\_

## **Super Listener Earphones!**

#### **Materials:**

- 2 plastic funnels
- I metre of plastic tubing





#### **Instructions:**

- I. Push a plastic funnel into each end of the plastic tubing. Push hard so the funnels stay in place.
- 2. Place one funnel over your heart, and the other over your ear. What do you hear?

## Think About It...

- 1. What is the apparatus that doctors use to check our heart?
- 2. How do these devices work?



#### Sound and Solids?

**Predict:** Do sounds travel faster in solids than gases?



### **Loud Liquids?**

**Predict:** Do sounds travel faster in liquids than gases?



### **States of Matter - Activity!**

- I. Divide the class into 10 groups. Take 6 of the groups and call them the **solids**. Take 3 of the groups and call them the **liquids**. Call the final group the **gases**.
- 2. Spread out in your group (solid, liquid, or gas) from the front of the class to the back. There should be I line for each group.
- 3. Your teacher will give the person at the back of the line a **password**, which they will have to run and tell to the next person when told to start. (This part is similar to the Telephone game.)
- 4. Wait for your teacher to tell you to go, then start!

#### **Questions:**

- I. Was this a fair game? Who won?
- 2. How were the groups arranged?
- 3. How is this set-up similar to the particles of solids, liquids, and gases?

### **Listen Up: Solids!**

Have a partner slap a ruler against a desk while you listen. Now, listen to the desk through your Super Listener Earphones while they hit it again. Which was louder?



### **Listen Up: Liquids!**

Using a container of water, have a partner "speak" into the water through a straw while you listen in the air. Now, use your

Super Listener Earphones to listen by submerging one end in the water. What do you notice?

