

Be Open: Sound Science

Date: 6th September, 2009

Readings: Mark 7: 24-37
James 2:1-10, (11-13), 14-17

Seeing Sound

The power of sound...

Extinguish a flame with sound:

Here's how to make an air gun that can blow out a candle.

The bullets it fires are blasts of sound.

Materials:

- ♦ cardboard tube from alfoil/ cling wrap roll
- ♦ plastic bag
- ♦ 2 elastic bands, sticky tape
- ♦ pencil
- ♦ candle, dish, plasticine or blutac

Air gun:

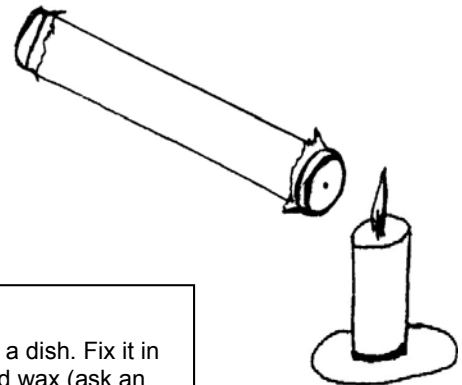
- ♦ Cut out two circles from a plastic bag.
- ♦ Make a small hole with a pencil in the middle of one of the circles.
- ♦ Slip the circles over the end of a cardboard tube and pull them as tight as a drum using elastic bands to make them really tight. Use some sticky tape to hold them in place if necessary.

Procedure:

1. Set a lighted candle on a dish. Fix it in place with a little melted wax (ask an adult to help) or with some plasticine or blutac.
2. Hold the air gun near the candle and aim the pinhole at the flame. Slap the other end of the tube with your hand. What happens to the flame?

Explanation:

The vibrating plastic skin sends a wave of air rolling down the tube. When the wave hits the small hole it shoots out hard enough to blow out the candle.



From
KUCA NEWS
Winter 2005
page 29

When Jesus healed a man who was deaf and mute, imagine the amazement he'd have felt when experiencing sound for the first time!

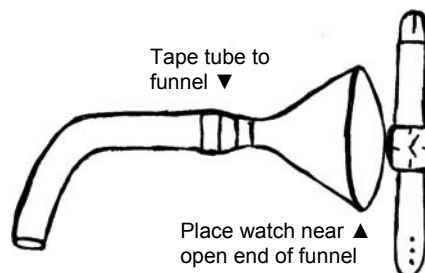
Listening Tube

You will need:

- ♦ a funnel
- ♦ a piece of rubber hose
- ♦ a ticking watch or clock
- ♦ masking or other tape

What to do:

- ♦ Stick one end of the rubber hose over the small end of the funnel.
- ♦ Fasten with tape.
- ♦ Press the funnel against the ticking clock or watch and place the rubber hose end to your ear. What do you hear? Is the ticking louder with or without the tube?
- ♦ Press the funnel against your heart. What do you hear?



From KUCA NEWS Winter 2006 page 21

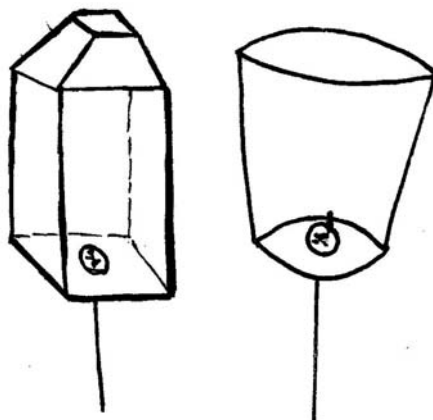
What's this Sound?

You will need:

- ♦ empty clean milk cartons
- ♦ string
- ♦ buttons
- ♦ a nail
- ♦ hammer
- ♦ tin cans
- ♦ damp paper towel or cloth
- ♦ disposable plastic cups
- ♦ foam cups
- ♦ plastic bottles

What to do:

- ♦ Poke a tiny hole in the bottom of a milk carton.
- ♦ Thread a length of string through the hole into the milk carton, then through the button so that the button is inside the carton.
- ♦ Knot the string round the button and pull the string so the button is held firmly against the hole.
- ♦ Pull the string tight and stroke it with the damp, paper towel or cloth. What do you hear? It should sound like a roaring lion.



This can also be used for other stories, e.g. about animals

From KUCA NEWS
Winter 2006 page 21

Try this also:

- ♦ With the hammer and nail, make a hole in the bottom of a tin can.
- ♦ Attach the string and button as before.
- ♦ Rub the string with the damp towel. What sound does it make? It should sound like a rooster crowing.

Try it with plastic cups, foam cups or plastic bottles. What other sounds can you make? Do any of them sound like other animals?