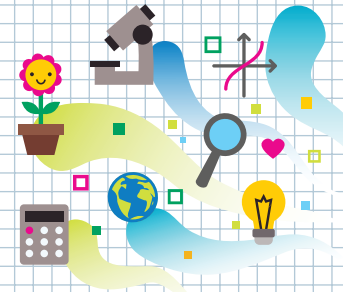




HEADS IN, HEARTS IN

Magnetic Bottle

Instructions for Set-Up



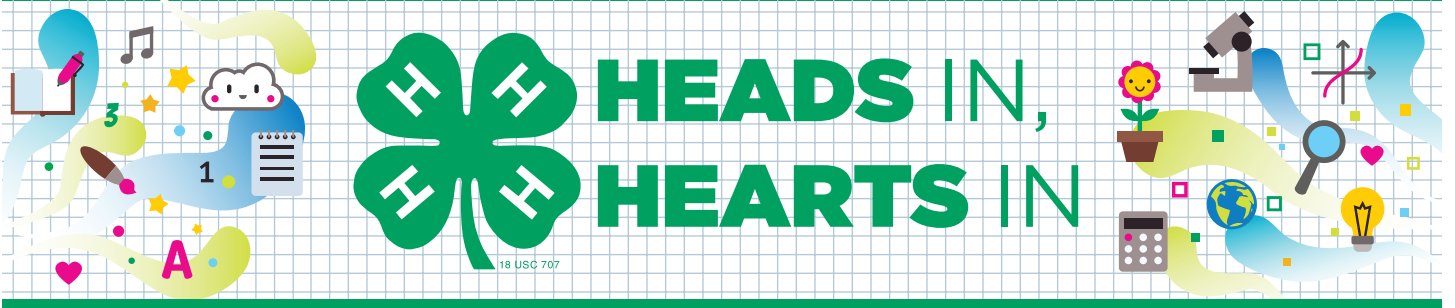
Supplies

- “Guide for Families” handout
- Clear plastic standup display (optional)
- Pipe cleaners or chenille stems
- 2-liter plastic pop bottle
- 2 feet of yarn
- Strong magnet with attached carabiner
- Display table

Activity Preparation

- ▶ Purchase or locate items on supply list.
- ▶ Print one copy of the “Guide for Families” handout. Laminate or place in a clear plastic standup display to allow participants to see it more readily.
- ▶ Cut the pipe cleaners or chenille stems into 1½- to 2-inch sections.
- ▶ Remove and discard the cap of the 2-liter plastic pop bottle. Clean the bottle and allow to dry.
- ▶ Attach one end of the yarn to the carabiner on the strong magnet.
- ▶ Attach the other end of the yarn to the neck of the pop bottle, tying tightly.
- ▶ Set up the display table and arrange needed supplies.





Magnetic Bottle

Guide for Families

Learning Objectives

What you need to know:

Magnets are objects that produce **magnetic fields** and attract **metals** such as iron, nickel and cobalt. Pipe cleaners or chenille stems are made of several strands of metal twisted around threads of cotton.

What you will do and learn:

You will investigate magnetic properties.

Instructions

1. Put several pieces of pipe cleaner into the plastic bottle.
2. What do you think will happen when you place the magnet to the side of the plastic bottle?
3. The magnet will attract the pipe cleaners. When this happens, move the magnet around the outside edges of the plastic bottle.
4. The pipe cleaners should move with the magnet.
5. Discuss:
 - ▶ Why are the pipe cleaners moving with the magnet?
 - ▶ What would happen if there were more pipe cleaners in the bottle?
 - ▶ What would happen if there were fewer pipe cleaners in the bottle?
 - ▶ What happens when you remove the magnet from the side of the pop bottle?

Once the metal from the pipe cleaners get close enough to the magnet, they are attracted and will stick together. No matter where the magnet goes, the pipe cleaners will follow. Only when they are separated will the pipe cleaners fall back into the bottom of the plastic bottle.