

# 1 Sinking bottle

## Prerequisite skills

- Lift and pour water up to a fill line
- Discriminate between an empty bottle and one with colored water

## Materials

- Two 16-ounce clear plastic bottles
- Water
- Food coloring
- Colored plastic tape
- Dishpan (or tub)
- Watering can (or pitcher)

## Teaching tips


- Fill one bottle with water and add a drop of food coloring so it is easy to tell that it contains water. Label the bottle "water." Label the other bottle "no water."
- Use the colored tape to indicate a fill line in the dishpan. Make sure the water will be deep enough so the bottle with water can clearly sink below the surface.
- Put enough water in the watering can to fill the dishpan to the fill line. Label the can "water." To keep the can from being too heavy, you might need to provide more than one can of water.

## Results

Density refers to the weight of an object or liquid, given its size. The empty bottle floats because it is filled with air, which is less dense than water. The bottle of water sinks because it has the same density as the water in the dishpan.

### 1 Sinking bottle

**Materials**




water



pan




bottle with water in it




bottle without water in it


**Directions**



1 Pour water into the pan up to the line.




2 Put the bottle with water in the pan.




3 Put the bottle without water in the pan.

**Observation**



Both bottles fall to the bottom.



The bottle without water floats.

10 • UNIT ONE • Water

# 6 Paperclip pick-up



## Prerequisite skills

- Hold a magnet and use it to pick up paperclips
- Count to 10 with a number line
- Copy the numbers 1–10

## Materials

- 2 identical, U-shaped magnets
- Large paperclips
- 2 envelopes
- 2 number lines (1–10)
- Paper
- Marker

## Teaching tips

- Select 2 easy-to-hold magnets, powerful enough to pick up a number of large paperclips.
- Put the paperclips into 2 envelopes, 10 paper clips in each envelope.
- Create 2 simple number lines (1–10), leaving enough space to place a paperclip by each number.
- After each student writes down how many paperclips he or she picked up, ask who has more.

## Results

Most paperclips are made of steel, which is attracted to magnets.

### 6 Paperclip pick-up

**Materials**

- paperclips
- 2 magnets
- 2 number lines
- paper
- marker

**Directions**

- 1 Put the paperclips on the table.
- 2 Pick up the paperclips with your magnet.
- 3 Count the paperclips that are on your magnet.
- 4 Write the number.

**Observation**

Partner A has more paperclips.  Partner B has more paperclips.

118 • UNIT SIX • Magnets

# 1 Sinking bottle

## Materials



water



pan



bottle with  
water in it



bottle without  
water in it

## Directions



1 Pour water into the pan up to the line.



2 Put the bottle with water in the pan.



3 Put the bottle without water in the pan.

## Observation



Both bottles fall to the bottom.

The bottle without water floats.

# 6 Paperclip pick-up



## Materials



paperclips



2 magnets



2 number lines



paper

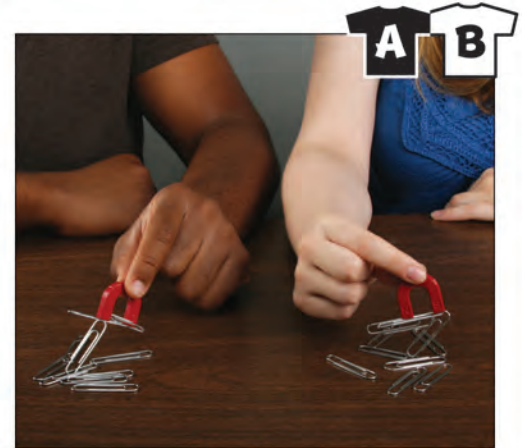


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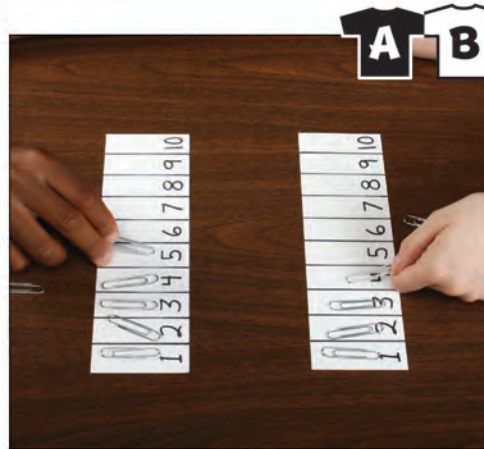
## Directions



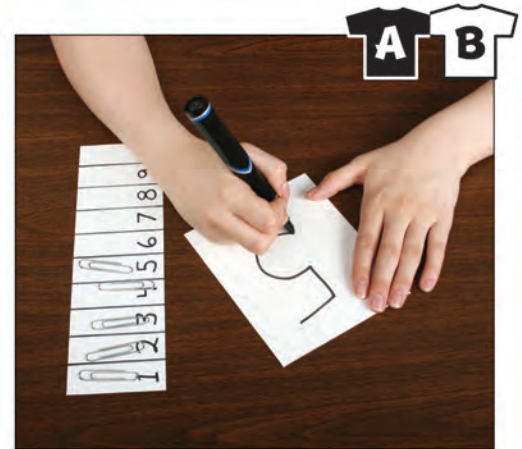
1 Put the paperclips on the table.



2 Pick up the paperclips with your magnet.



3 Count the paperclips that are on your magnet.



4 Write the number.

## Observation



Partner A has more paperclips.



Partner B has more paperclips.