

Activity Instructions

The following items will be needed for this activity:

per group:

- pitcher of water
- pourable container of vegetable oil
- 500 mL beaker
- 50 mL graduated cylinder
- scoopula
- salt
- sugar
- measuring cup
- tablespoon

Step 1

Fill the beaker three-quarters full with water. Students can practice using a measuring cup by dispensing the exact volume of water determined in the *Prep Instructions*.



Figure 1



Figure 2

Step 2

Pour oil into the beaker, such that a layer of oil at least 1 cm thick forms above the water level (**Figure 1**). Students can use a tablespoon by dispensing the exact volume of oil determined in the *Prep Instructions*.

Step 3

Add salt until oil droplets begin to sink to the bottom of the beaker. Observe that some of the oil droplets at the bottom of the beaker begin to float back to the surface (**Figure 2**).

Step 4

Adding additional salt once the droplets rise will cause the droplets to descend. The sinking and rising of the oil droplets can be repeated until the water becomes saturated with salt.



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Cauldron Bubbles - Activity Instructions

Step 5

Empty the beaker and repeat Steps 1 and 2.

Step 6

Add sugar until oil droplets to sink to the bottom of the beaker. Unlike the salt/oil droplets, the sugar/oil droplets do not ascend, but instead stay at the bottom of the beaker.