

# 10. Floating and Sinking in Water

**Subject:** Fluids (water)

**Objective:** To get a “feel” for the property of density.

**Logistics:** Experiment can be done in teams of 3 or 4 or as a demonstration for the whole class.

**Materials:**

*4 or 5 plastic two quart pitchers*

*golf ball*

*paper clips*

*cork*

*ping-pong ball*

*marble*

*gum eraser*

*coins*

*pencil*

*ice cream stick*

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**Procedure:**

**Step 1:** Fill one pitcher with water. Show students objects, one at a time. Ask students which objects will sink and which objects will float. Drop one object at a time in water and test their guesses. Ask if there is a way to predict what will sink and what will float.

**Step 2:** Have groups repeat demonstration. Ask them to test guesses by experiment and then to develop principle for floating and sinking (density).

**Step 3:** Have students assemble a combination of objects that “hover” in water. (This may be done in class or by each student at home.) Using adhesive tape and/or rubber bands students are to combine floating and sinking objects so that combination “hovers” in water. Concept is density differences between water and objects control sinking and floating.

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**Vocabulary:** *density*

**What they Learn:** All objects have density and if the density is greater than water they will sink; if less than water, they will float. Different fluids have different densities. Talk about fluids with different densities, such as, mercury and alcohol.