



# Water-Themed Lessons & Activities

from **FAIRMOUNT WATER WORKS**

## ***Properties of Matter: Sink or Float***

### ***Introduction:***

Density of an object determines what makes it sink or float. It is important to the treatment process at both Philadelphia Water Department's Drinking Water and Wastewater facilities. Philadelphia's tap water is first pumped from the river to a basin where gravity allows sediment to settle before it starts the treatment process. During our wastewater treatment process, an early step includes one in which suspended solids settle to the bottom and oil and grease rise to the top.

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### ***Learning Objectives:***

Students will be able to

- Predict and observe the density properties of matter in water
- Record results

### ***Materials:***

- Journal, notebook or paper for recording predictions, observations and results
  - Pen/Pencil
  - Large bowl filled with water for testing the properties
  - 8-10 small objects to test (that fit in the bowl) such as household items like a fork, pen, penny, bottle caps, empty bottles and natural items like pebbles, leaves, and sticks
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### ***Activity Procedure:***

1. Make a chart with three columns: Item/Prediction ("I think this will sink or float")/Results
2. Pick the items one at a time and predict, observe, record
3. Drop your item into your bowl of water
4. See if you can write at the bottom of your chart how well you were at predicting and why? Did your ability to predict correctly improve? Stay the same? Go down? Why?
5. Make it a game for family members

**Suggested Grade Level:** K-5<sup>th</sup>

**Suggested Subject Area(s):** Science