

A DENSITY DILEMMA

KEY OPENING QUESTION: Which liquids are more dense?

MATERIALS: 4 cups containing the following liquids:

One of Vegetable Oil

One of Corn Syrup

One of Blue Shampoo

One of Soy Sauce

7 Small Plastic Portion Cups (1.25 oz)

PROCEDURE:

1. Layer 2 liquids in 6 of the Small Plastic Portion cups ($\frac{1}{4}$ to $\frac{1}{2}$ inch layers) in the following combinations:
 - 1) oil/shampoo
 - 2) corn syrup/shampoo
 - 3) soy sauce/shampoo
 - 4) oil/corn syrup
 - 5) oil/soy sauce
 - 6) soy sauce/corn syrup
2. Based on what you know about density. Predict which liquid will sink to the bottom.
3. Line up the cups to determine the order of the four liquids (least dense to most dense)
 - Which liquid is always on top?
 - Which liquid is always on the bottom?
4. Predict how the 4 liquids will layer when poured in the same container.
5. Experiment to find out by pouring combination one (oil/shampoo) and combination six (soy sauce/corn syrup) into the remaining Small Plastic Portion cup.