Density

(Remember always ask permission and clean up after you are done)

Materials Needed:

Clear container that can hold about 3-4 cups of liquid
½ cup vegetable oil
½ cup sugar water
½ cup water
Turkey baster
A variety of objects to float – penny, grape, birthday cake candle

Directions:

- Put about ¾ of a cup of warm water into a container. Dissolve sugar into the warm water until no more will dissolve
- In your clear container pot about 2 inches of plain water
- Next, using the turkey baster you will **slowly** and gently squeeze about 2 inches of sugar water on top of the plain water.
- Being careful, slowly pour about 1 inch of oil into the container. You have three layers of liquid. It is hard to see the difference between the bottom and middle layer.
- Drop the each object in the liquid, where do they float?
- Can you get an object to float at each level?
- Take some photos as your colors swirl. You can post them on the Beanstack website in your summer reading account.

The density of a given liquid is determined by mass or how closely the molecules in that liquid are packed. If the density of an object in the fluid is greater than the density of the fluid, the object will sink. If the density is less than that of the fluid, the object will float upward due to the buoyancy from the fluid.

Which figure has a greater density? The figure on the left has a greater density, notice that square has more circles. Each circle has less space, this is what makes it dense.