

## Differentiation of Layers

The following substances are going to be poured into an Erlenmeyer flask in the order that they are listed in the table below.

**Predictions:**

- Will the substances mix together or separate?
  
- Will shaking the mixture change whether the substances mix or separate?
  
- If you think the substances separate, fill in the prediction column in the data table below. Ranking a substance as 1 means that it will be the layer at the bottom of the flask. A rank of 9 means that the substance is floating on top of all of the other layers.

Substance	Density	Density Rank 1-9 (most dense = 1)	Prediction: Location 1-9 (bottom = 1, top = 9)	Location 1-9 (bottom = 1, top = 9)
Air	0.001 g/mL			
Ethanol (colored green)	0.789 g/mL			
Wood	0.85 g/cm <sup>3</sup>			
Corn Oil (yellow)	0.93 g/mL			
Water (colored blue)	1.0 g/mL			
Plastic	1.17 g/cm <sup>3</sup>			
Glycerin (colored red)	1.26 g/mL			
Dark Corn Syrup (brown)	1.38 g/mL			
Steel	7.86 g/cm <sup>3</sup>			

Differentiation: