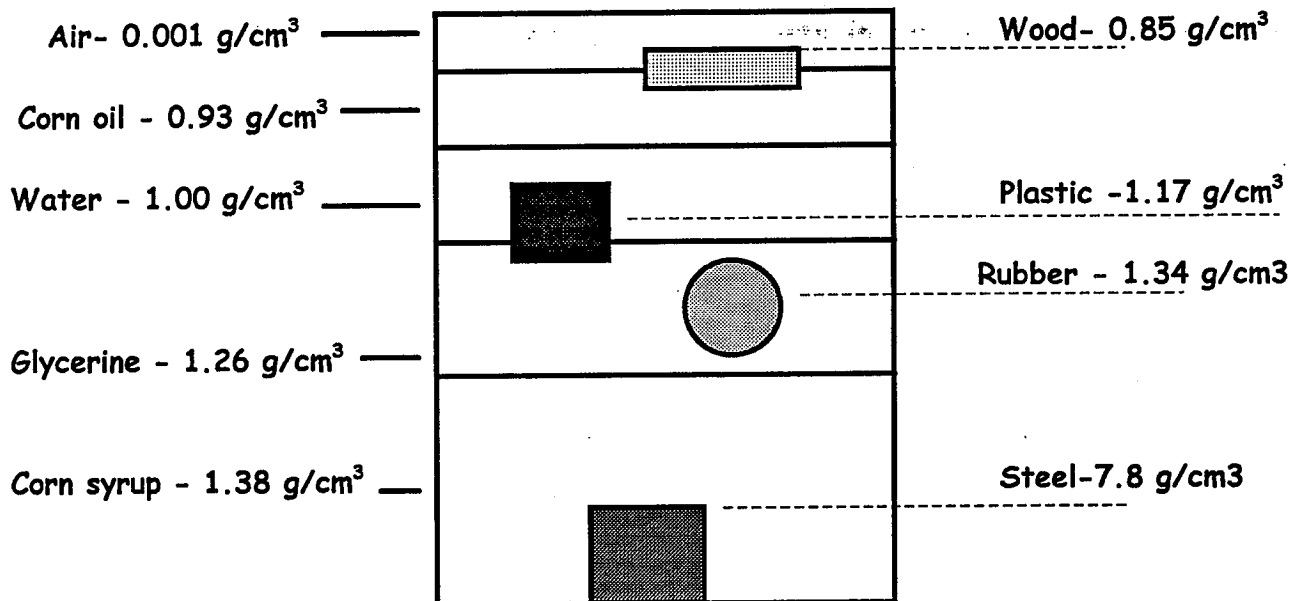


PROBLEM SOLVING ACTIVITY: DENSITY DISASTER



TASK: Look closely at the drawing above. It shows the densities of some common substances. As you can see, some objects float in water, and others don't. Pretend that the beaker represents the ocean. Floating in the ocean is an oil tanker filled with crude oil. (Remember that because much of its volume is filled with air, a ship such as a tanker is less dense than the water and will float!) Suddenly the tanker runs aground on a reef. A huge hole is torn in the ship's hull and oil gushes out into the ocean. This could be a major environmental disaster. Assume that the crude oil has the same density as corn oil. Answer the questions below in preparation for a press conference you are holding about the oil spill.

- Why does the oil pose a great danger?
- Is the danger greater to birds and marine mammals than to fish and other bottom dwelling organisms of the ocean?
- How is the density of oil an advantage in the cleanup?
- Why would an oil spill be an even greater problem if the density of the oil were the same as that of corn syrup?