Spheres of Oil

Purpose
To demonstrate that gravity has little effect on drops of oil submerged in a liquid.

Materials
1/2 cup (125 ml) tap water
Clear drinking glass
1/2 cup (125 ml) rubbing alcohol
Eyedropper
Cooking oil

Procedure
• Pour the water into the glass.
• Tilt the glass and very slowly pour in the alcohol. Be careful not to shake the glass because the alcohol and water will mix.
  
  **CAUTION: Do not get alcohol near your nose or mouth.**
• Fill the eyedropper with the cooking oil.
• Place the tip of the dropper below the surface of the top alcohol layer and squeeze out several drops of oil.

Results
The alcohol forms a layer on top of the water. The drops of oil form nearly perfect spheres that float in the center below the alcohol and on top of the water.

Why?
The downward pull of gravity has little effect on the drops of oil because they are surrounded by liquid molecules that are pulling on them in all directions. The oil drops are also pulling on each other, and without the effects of gravity, the oil pulls itself into a shape that takes up the least surface area, a sphere.