

 **DIY SCI: Do You See What I See?****What is it?**

Did you know that light bends when it travels through different materials? This physics concept is known as refraction! In this experiment we'll get to see what happens when light travels through air, glass, water, back out the glass, through air again, and to the paper! Anytime the light passes through a different medium, it bends which is why the objects we see are displaced.

As light passes from air to water it slows down, making it look like the straw looks broken at the boundary where the 2 mediums meet. Light from the top of the straw travels straight to the eye while the part that is submerged is refracted and absorbed.

What you need

- A glass cup
- Water
- Oil
- A straw

What to do:

1. Fill a third of the cup with water
2. Slowly add oil to layer it on top of the water till the glass is $\frac{2}{3}$ full.
3. Insert the straw into the cup

What do you notice?

What do you notice about the straw through the different fluids?

Above and below the different boundaries the straw appears to be intact, what does this tell us about refraction? Between the oil and the water, does it look like the straw is bent again? Compare this to the boundary between the oil and air.

Considering water is more dense than oil, would we expect more or less refraction between water and air than oil and air?

