Optical Illusion
Magicians often rely upon illusions, or tricks of sight, to fool their audiences. Here are some magical tricks for you to do, based on the fact that light travels at different speeds through different materials.

Materials
- glass with straight sides
- jug of water
- teaspoon
- cup and coin

1. Half-fill the glass with water and put the teaspoon into it.
2. Hold the glass so that it is level with your eyes.

   The spoon seems to be broken at the boundary between air and water because light is refracted, or bent, as it passes from air to water. Water also magnifies the spoon.

3. Put the cup on a flat surface and put the coin into it.
4. Slowly move the cup away from you until the coin suddenly passes beyond your line of vision.

5. Keep quite still and ask someone to pour water into the cup until you can see the coin again.

   When the level of the water is raised, light travelling from the coin can be refracted at a higher point, and so reach your eye. The coin also seems to be higher in the cup. That’s because light travels more slowly in water than in air.