

### ***EXPERIMENT: FOUNTAIN OF LIGHT***

A rainbow works because the raindrops not only *refract* light, but *reflect* it. Can we use this reflection to “trap” light?

**You will need:**

a dark room  
a sink  
a bottle with a narrow mouth  
a towel to wrap around the bottle  
a flashlight

1. Fill the bottle with water and wrap the towel around it. The towel should cover the sides of the bottle, but leave the back end and mouth free.
2. In the dark room, put the flashlight against the back of the bottle and turn the flashlight on. Make sure the towel doesn't let light leave the bottle except out the top.
3. Keep the flashlight against the back of the bottle and *slowly pour the water into the sink*. See whether light hits the wall behind the sink.
4. When the water is out, see whether light hits the wall.
5. Describe where the light went as you poured the water.
  
6. Why did the light do this?
  
  
7. Did the light act differently when the water ran out? Why?