

Wednesday 29th April – Science

Reflection and Refraction

Watch the next Bill Nye video: <https://www.youtube.com/watch?v=H8gX6a6yTT4>

Today's video has four key learning points:

- when light is reflected or refracted, it changes direction
- when light hits something it can be bent, bounced or absorbed
- when waves slow down, they change direction
- the way a lens is curved affects how it bends light

The video suggests some activities which you can do at home to investigate reflection and refraction:

- make a periscope
- bounce your remote control beam
- investigate your reflection in a spoon
- put a penny in a pie dish or shallow bowl (more instructions here: <http://www.lovemyscience.com/risingcoin.html>)
- look at a pencil in water in a clear glass - you could also try this with different clear liquids such as oil or honey – if the liquid is thicker (more dense), how does this affect the way that light travels?
- try a tin can and a torch (ask an adult to help make the hole)

There are lots of other fun experiments that you can do to investigate this further. Have a go at some of these, and take photos or draw and write about what you discover. Keep asking yourself, 'What does this show about how light travels?'

<https://www.whatdowedoallday.com/water-refraction-science-experiment>

<https://gosciencegirls.com/refraction-light-glass-water-play-steam-kids/> (NOT just for girls!)

<https://buggyandbuddy.com/homemade-spectroscope/>

<https://www.science-sparks.com/make-your-own-magnifying-glass/>

<http://www.lovemyscience.com/bendinglightinthedark.html>