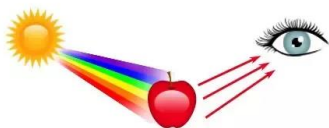
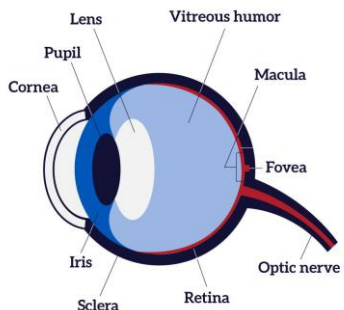


Year 6: Fabulous Physics

1. Scientific terms	Definitions
Light	A form of energy that travels in a wave from a source
Light source	An object which produces its own light, e.g. the sun
Reflection	When light bounces off a surface changing the direction of the ray of light
Law of reflection	The angle of the ray of light is equal to the light that is reflected
Refraction	When light bends as it passes through a material, e.g. light appears to bend when it moves from air to water
Shadow	An area of darkness where light has been blocked.
Transparent	Objects that allow light to easily travel through them, meaning you can see through them clearly, e.g. a window
Translucent	Objects that allow light to travel through them, but you cannot see clearly through them, e.g. tissue paper
Opaque	Objects that do not allow light to travel through them, e.g. a brick

4. The Eye

- The eye is a sphere with a hole at the front, the pupil, which lets in light.
- Inside the eye is a lens, which focuses the light onto a surface at the back of the eyeball.
- This surface is called the retina.
- The retina is made up of special cells, which detect light and send messages to our brain, allowing us to see.
- When we have our eyes tested, an optician shines a light into our eye and uses a magnifying lens.



2. Reflection

When light rays hit a surface, they are reflected at an equal angle.

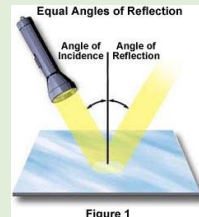
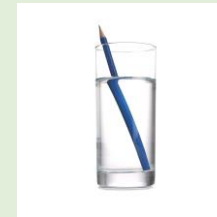


Figure 1

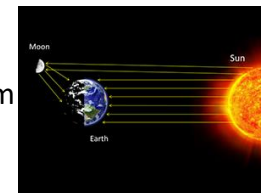
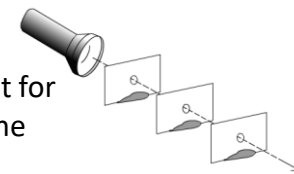
Refraction

Light appears to bend when it travels through air to water.



3. Light

- Light appears to travel in straight lines
- The light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object to be seen.
- For example: we can only see the moon because it reflects light from the sun and we can only see a chair because it reflects light from the sun or from a light source.
- Light travels as a wave, but it does not need a medium to travel through: it can travel through a vacuum (a completely airless space).



Shadows

- Objects that block light (are not fully transparent) will cause shadows.
- Because light travels in straight lines the shape of the shadow will be the same as the outline shape of the object.

