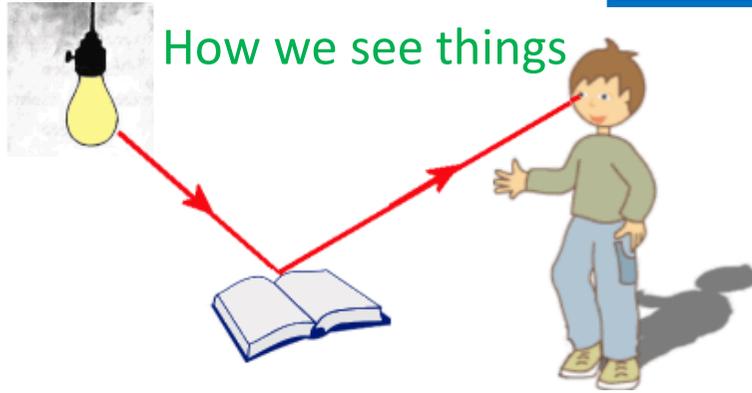
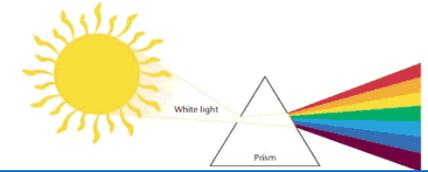


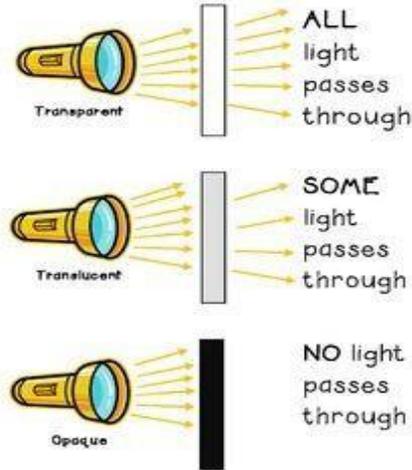
# Light



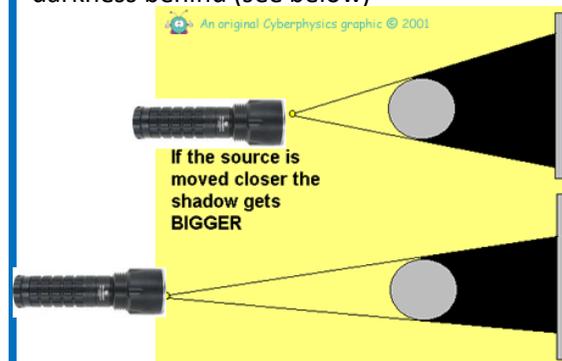
## How we see things

We see things because light (coming from a light source like the sun or a light bulb) reflects off / bounces off objects like this book and enters our eyes. Most of the light from the bulb does not reach his eyes; it might reach other people's, which is why they would see the book in a different way from him. **REMEMBER: NO LIGHT COMES OUT OF OUR EYES: IT ENTERS THEM.** (We're not Superman!)

## Translucent, Transparent & Opaque



**OPAQUE** objects are easiest to see because they reflect most of the light back to our eyes. They also cast the clearest shadows, by blocking the light and making a patch of darkness behind (see below)

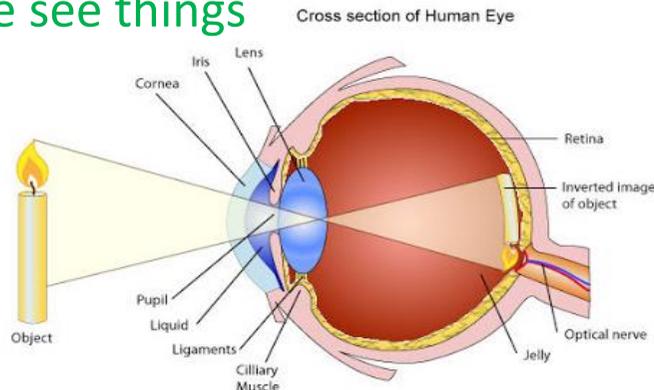


**TRANSPARENT** objects are hard to see because all the light passes through them, so they look as though they're not there!

## Key Vocabulary

light	is a form of energy that travels in a wave from a source
light source	is an object that makes its own light
reflection	is when light bounces off a surface, changing the direction of the rays of light
incident ray	is a ray of light that hits a surface. It hits the surface at the <b>angle of incidence</b>
reflected ray	is a ray of light that has bounced back after hitting a surface. It leaves the surface at the <b>angle of reflection</b>
the law of reflection	states that the <b>angle of incidence</b> is equal to the <b>angle of reflection</b> (see diag. top left)
shadow	an area of darkness where light has been blocked
spectrum	is light that is visible to the human eye. It is made up of a colour spectrum (rainbow). You can use a transparent prism to break up white light into all the colours of the spectrum (see pic. top right)
transparent	when objects let... all light

## How we see things



Light from the object enters our eye through a hole called the **pupil**. Behind, the **lens** focuses the light on to the screen at the back of the eye, called the **retina**. However, the image flips because the light rays pass each other in the lens. The **optical nerve** sends the image information to the brain, which flips it back, and we see the object!