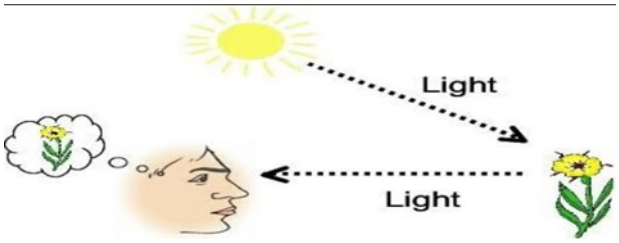
The Hermitage School – Science		
Topic: Light	**Year: 6**	**Strand: Physics**

How Humans See



How humans use reflected light to see objects.

What should I already know?

- We need light in order to see
- Dark is the absence of light
- Light can be reflected
- You should never look directly at the sun
- Shadows are formed when a light source is blocked by an opaque object

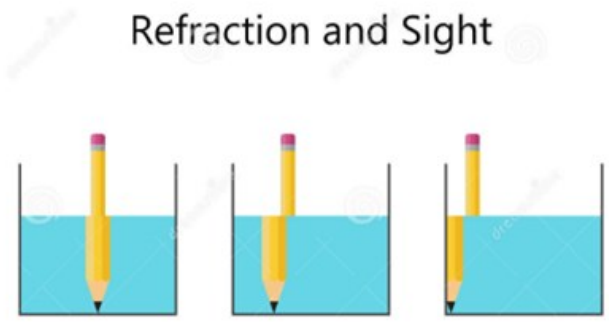
Scientific Skills and Enquiry

- To draw scientific diagrams to show how objects are seen and the direction in which light travels
- To investigate the relationship between light sources, objects and shadows
- To understand the need to change one variable in an experiment to construct a fair test
- To take scientific readings, check their accuracy and draw conclusions from them
- To understand the need to repeat readings within an experiment
- To made prediction based on a hypothesis
- To report and represent findings in the most appropriate way and explain choices

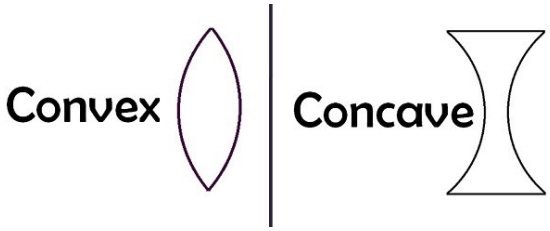
What should I know by the end?

- Light travels in straight lines
- Objects can be seen because they give out or reflect light into the eye
- Mirrors can reflect or distort images depending on their shape
- Refraction occurs when there is a change in direction of light passing from one medium to another
- We see because light travels from a light source to our eyes or from a light source to objects and then to our eyes
- Shadows have the same shape as the objects that cast them
- Shadows change size depending on distance from a light source

The Process of Refraction



Convex and Concave Lens



Vocabulary

Refraction – the bending of light as it passes through one substance to another
Reflection – the change in direction of a light wave
Absorbing surface – prevents the refraction or reflection of light
Concave – curving inwards
Convex – curving outwards
Luminous – generating or reflecting light
Shadow – a dark area produced by an object blocking a light source
Translucent – lets light through but objects cannot be seen clearly
Transparent – lets light through and objects can be seen clearly
Opaque – not transparent, unclear
Light source – an object that generates light eg the sun but not the moon
Lux – a measure for light