

# Light - Year 3 - Unit 1

## Scientific Enquiry



### comparative & fair testing

**Comparative testing** means testing objects to rank them. We will test and compare materials to find the most reflective. **Fair tests** are enquiries that observe or measure the impact of changing one variable when all others are kept the same. We will carry out fair tests to explore how shadows can be changed.

### pattern seeking

We **seek patterns** by looking for links between variables. We will seek patterns between changes to a light source or an object and the shadows made.



## Working Scientifically

**Asking** scientific questions

**Planning** an enquiry

**Observing** closely

**Taking measurements**

**Gathering and recording results**

**Presenting** results

**Interpreting** results

**Concluding** (drawing conclusions)

**Predicting**

**Evaluating** an enquiry results

### light

We see objects because our eyes can sense **light**. Dark is the absence of **light**. We cannot see anything in complete darkness.



### light source

Some objects, like the sun, light bulbs and candles are **light sources** or sources of light.



### opaque

If a material is **opaque**, no light is able to pass through it. It is not able to be seen through.



### transparent

**Transparent** materials allow light to pass through. They are see-through.



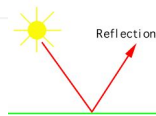
### translucent

**Translucent** materials are not completely see-through but clear enough to allow rays of light to pass through.



### reflect

**Reflect** means to throw back light without absorbing it. Light is **reflected** from surfaces.



Objects are easier to see when there is less light if they are **reflective**.



### shadow

**Shadows** are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks the light.



The size of the shadow depends on the position of the source, object and surface.

### Things you learnt in previous topics

In Year 1 you identified, named, drew and labelled the basic parts of the human body and were able to say which part of the body is associated with each sense. You described the simple physical properties of a variety of everyday materials for example plastic is see-through and waterproof.



### How this connects with future learning

In Year 6 you will recognise that light appears to travel in straight lines and use this idea to explain that objects are seen because they give out or reflect light into the eye. You will explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. You will use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.