

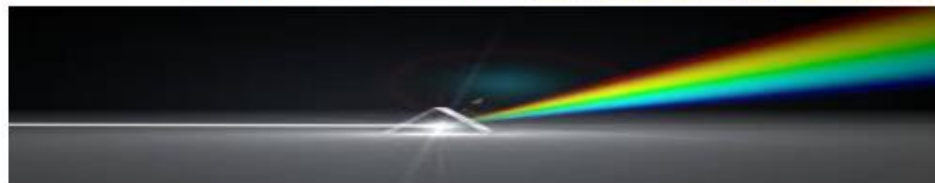


### What should I already know?

Some sources of light and where light comes from.

#### Vocabulary

Light Source	An object that emits its own light.
Opaque	When an object lets no light through.
Reflection	When a light ray hits a surface and bounces off.
Shadow	A dark shape that appears on a surface when something moves between the light source and an object.
Translucent	When an object lets some light through.
Transparent	When an object lets light past through so objects can be seen behind.
UV light	A form of radiation which isn't visible to the human eye.



### Scientific enquiry & skills

#### Pupils should be taught to:

- Recognise that they need light in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by a solid object.
- Find patterns in the way that the size of shadows change.

#### Pupils might work scientifically by:

- Looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.

### What we will learn about

- Investigate what we need in order to see objects in a dark place and discover how light travels.
- Design a stage for a shadow puppet theatre and discover first hand how the light we see is really made of a spectrum of colours.
- Predict and then investigate how well different colours and materials reflect light in a simulated dark cave.
- Record findings by sorting and classifying colour samples, noting observations and drawing conclusions.
- Test their knowledge of light and learn some exciting new light facts. Investigate the properties of mirrors and reflections. Note down observations and use scientific knowledge on light to explain their findings.
- Discover the effect of using 2 mirrors and how this can help us see round corners using a periscope.
- Understand how opaque, transparent and translucent objects cast shadows in a strong beam of light. Discover what these words mean and make predictions on the type of shadow different objects will cast.
- Investigate how the orientation of your hand affects the shadow. Have fun creating hand shadows with a torch.