

## Bretnside Knowledge Organiser - Science

<b>Year: 3</b>	<b>Topic:</b> How far can you throw your shadow?	<b>National curriculum:</b> Light— 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 an opaque object find patterns in the way that the size of shadows change
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### What I should already know:

I know that light can be produced in different ways, through the sun or electricity.  
 I know that shiny materials do not make light but do reflect it.  
 I understand that shadows are caused when certain materials block light.

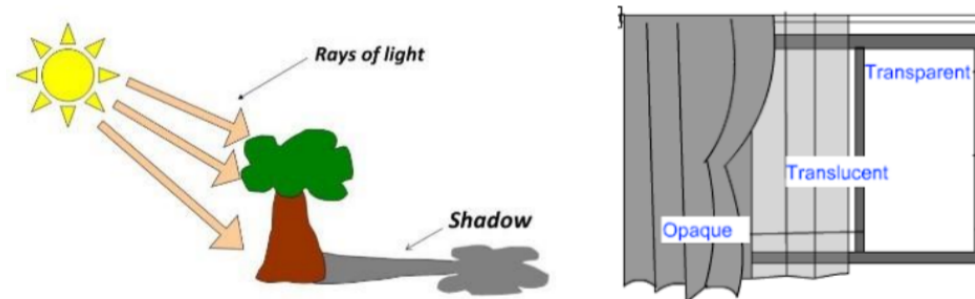
### What I should know at the end of the topic:

I can explain how light is formed.  
 I can understand how a shadow moves.  
 I can explain how a shadow is formed.  
 I can explain the relationship between the sun and moon.  
 I can identify what are and what are not light sources.  
 I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes.  
 I can use different ideas and suggest how to find something out.  
 I can ask relevant scientific questions.

### Investigate:

What is the dark and why are people afraid of it?  
 What is reflection and how much do we know about it?  
 How can you explain the relationship between the Earth, Sun and the Moon (in terms of lighting up the moon)?  
 How can you set up an experiment to show how shiny things respond in the dark?  
 Why does your shadow change shape and how many interesting creatures can you create using shadows?

### Diagrams:



### Vocabulary

Source	Where something comes from.
Reflects	Sent back from the surface and not pass through it.
Sun	The star at the centre of the solar system that gives off light or warmth.
UV Rays	A type of radiation that cannot be seen by humans.
Shadow	A dark shape on a surface that is made when something stands between a light and the surface.
Light	A brightness that lets you see things.
Translucent	If a material is translucent, some light can pass through it.
Transparent	If an object or substance is transparent, you can see through it.
Opaque	If an object or substance is opaque, you cannot see through it.