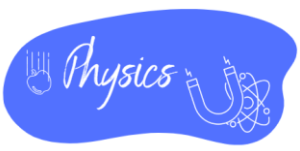


Pre unit assessment	<p>What is light and how do we see?</p> <p>Understand that we need light to see things and that darkness is the absence of light.</p> <p>Ask and answer relevant scientific questions.</p>	<p>How does light travel?</p> <p>Understand that light travels in straight lines from a light source.</p> <p>Make careful observations and use diagrams to record what we notice.</p>	<p>What happens when light hits a surface?</p> <p>Understand that light is reflected from surfaces and that smooth, flat, shiny surfaces are more reflective.</p> <p>Compare materials and classify them based on what we observe.</p>	<p>Can light pass through materials?</p> <p>Understand that some materials are transparent, translucent or opaque.</p> <p>Investigate and classify materials, recording findings systematically.</p>	<p>TAPS</p> <p>Can everything make a shadow?</p> <p>Understand that shadows form when light from a light source is blocked by an opaque object.</p> <p>Make careful observations and gather and record data to answer a question.</p>	<p>How can we change a shadow?</p> <p>Understand that the size of a shadow changes when the position of the light source changes.</p> <p>Set up a simple investigation, make measurements and record results.</p>	<p>How can we stay safe in sunlight?</p> <p>Understand that light from the Sun can be dangerous and identify ways to protect our eyes.</p> <p>Use secondary sources to research and present information.</p>	Post unit assessment
	 	 	 	 	 	 	 	



Year 3
Physics:
Light

Key Knowledge: Light and Dark

What is light and how do we see?
How does light travel?

We need **light to see things**



Darkness is the absence of light

A **light source** produces light.
The **sun** and electronic devices
can produce light.



Light travels in **straight lines**
from a light source

We see objects when light reaches our eyes.

Key Knowledge: Reflection and Materials

What happens when light hits a surface?
Can light pass through materials?

When light hits an object, it is
reflected.



Smooth, flat and shiny
surfaces are more reflective
than rough or bumpy surfaces.

Materials can be grouped according to how much
light passes through them.

Transparent materials let light through.

Translucent materials let some light through.

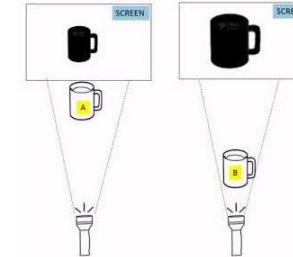
Opaque materials do not let light through.



Key Knowledge: Shadows and Sun Safety

How are shadows formed?
How can we change a shadow?
How can we stay safe in sunlight?

When an **opaque object**
blocks light, a shadow forms.



The **shape and size of a**
shadow can change when the
position of the light
source changes.

We can observe patterns in how shadows change
when the light source moves.



Light from the **Sun**
can be **dangerous**.

The Sun can damage our eyes because it is very
bright, so we need to **protect our eyes** and never
look directly at the Sun.



Asking questions

Asking questions that can be answered using a scientific enquiry.



Making predictions

Using prior knowledge to suggest what will happen in an enquiry.



Setting up tests

Deciding on the method and equipment to use to carry out an enquiry.



Observing and measuring

Using senses and measuring equipment to make observations about the enquiry.



Recording data

Using tables, drawings and other means to note observations and measurements.



Interpreting and communicating results

Using information from the data to say what you found out.



Evaluating

Reflecting on the success of the enquiry approach and identifying further questions for enquiry.

