

## Knowledge Organiser

### Year Group Year 3 and 4-Subject Science Term Summer 1

#### Prior Learning

By the end of KS1, pupils should already know that:

**Light helps us see things.**

Without light, we can't see.

**The Sun is very bright.** We must **never look at it** because it can hurt our eyes.

**Some things give out light.**

For example: the Sun, candles, lamps, torches.

**Some things do NOT give out light.**

They are just lit up by other light sources.

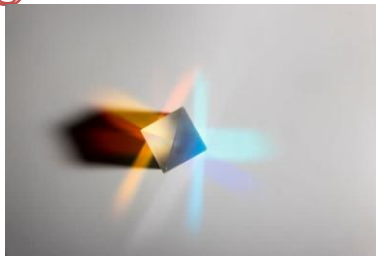
**Shadows happen when something blocks the light.**

A shadow is a dark shape on the ground or wall.

**Shadows change when the light moves.**

They can look longer or shorter at different times of day

## Light and Shadows



#### Key Skills Taught

- Observing how light behaves
- Investigating shadows
- Carrying out simple experiments
- Recording results clearly
- Using scientific vocabulary
- Working collaboratively

#### Vocabulary

Word	Definition
<b>Light</b>	A type of energy that helps us see things. It travels in straight lines.
<b>Light Source</b>	Something that <b>makes</b> its own light, like the Sun, a torch, or a candle.
<b>Reflect</b>	When light <b>bounces off</b> a surface. Shiny things reflect light well.
<b>Shadow</b>	A dark shape made when something <b>blocks the light</b> .
<b>Opaque</b>	An object that <b>does not let any light through</b> . You can't see through it.
<b>Transparent</b>	An object that <b>lets all the light through</b> . You can see clearly through it.
<b>Translucent</b>	An object that <b>lets some light through</b> , but not all. You can see light, but not clear shapes.
<b>Mirror</b>	A shiny surface that <b>reflects light</b> clearly, so you can see yourself.
<b>Absorb</b>	When an object <b>takes in</b> light instead of reflecting it. Dark colours absorb more light.

#### Key Knowledge Taught: *by the end of the unit pupils are expected to know*

- **We need light to see.**  
When there is no light, it is dark.
- **Light can bounce off surfaces.**  
This is called reflection. Shiny things reflect light well.
- **The Sun's light can be dangerous.**  
We must protect our eyes by wearing sunglasses, a hat, or staying in the shade.
- **Shadows happen when something blocks the light.**  
Only solid (opaque) objects can make a shadow.
- **Shadows can change size.**  
We can spot patterns, like shadows getting bigger when the light is close and smaller when it is further away.

**Extra Information:** This can be added to by teacher, parent or child