Learning Organiser for Year 3 Light

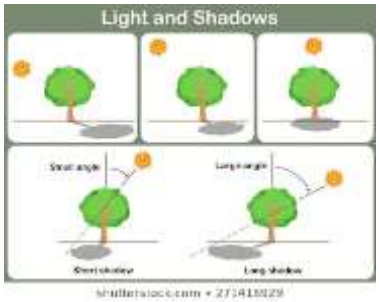
National Curriculum Summary Key Subject Concept	Key Questions
• Recognise that they need light in order to see things and that dark is the absence of light • Notice that light is reflected from surfaces • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes • 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	• How does distance from the light source affect the size of the shadow? • What kinds of light make sharp shadows? • How do shadows change during the day? • What is a light source? • Why do we need light? • How does light travel? • Why do lights seem brighter in the dark? • What happens when light is reflected from different surfaces?

Key Vocabulary	Definition
Reflect	Send back from a surface and not pass through it
Absorb	To take in or soak up
Solid	Firm and stable, not liquid
Artificial	Man made
Natural	Found in nature
Opaque	If a material is opaque, you cannot see through it
Translucent	If a material is translucent, some light can pass through it.
Transparent	If a material is transparent, you can see through it.
Emit	To give off or produce (the Sun emits light)

Key Facts

- Light sources emit light by burning, electricity or chemical reactions.

- Looking directly at the Sun is harmful to our eyes.
- Dark is the absence of light.
- At night time, we cannot see the Sun's light as the earth turns and our part of the Earth is not lit up by the Sun.
- The moon is not a source of light – it reflects light from the Sun.
- Shiny things are not light sources.
- Light travels in straight lines.
- When light is blocked by an opaque object, a dark shadow is formed.

Working Scientifically Skills	Diagrams/Charts/Pictures
Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Using straightforward scientific evidence to answer questions or to support their findings. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	How are shadows formed?  The size and shape of a shadow changes as the light source moves. 
Possible Experiences	**Biographical Information**
• Make a shadow clock. • Investigate how shadows change during the day. • Investigate what happens when light is reflected from a mirror.	Humphrey Davy (1778- 1829)  Investigated the idea of using electricity to create light Thomas Edison (1847 – 1931)  Known for inventing a practical light bulb