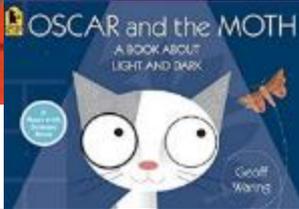


Year 3: Light and Dark Knowledge Mat

Subject Specific Vocabulary		Interesting Books	Sticky Knowledge about light and dark
reflection	A reflection occurs when a ray of light hits a surface and bounces off.	 	<input type="checkbox"/> Black and dark objects absorb light and heat whilst white or light objects reflect it.
shadows	A shadow is formed when an object blocks out the light. The object must be opaque or translucent to make a shadow.		<input type="checkbox"/> Some objects like glass are transparent which means that light can shine through them.
light source	The main light source for Earth is the Sun. Some other luminous objects give out light, for example, torches, candles and lamps.	Important facts to know by the end of the light and dark topic	<input type="checkbox"/> Our main source of light on Earth comes from the Sun. A ray of light travels very fast.
opaque	Opaque objects do not allow light to pass through them, in most cases creating a shadow.		<input type="checkbox"/> Darkness is made by blocking light from the sun or some other source of light, which makes shadows.
refraction	It is the change of direction of a light ray as it passes through different surfaces, for example, from air to water.	<ul style="list-style-type: none"> • What dark is (in relation to absence of light). • Know that we need light so we can see things. • Know that light can be reflected. • Know how a shadow is formed. • Understand why shadows change shape. • Know the dangers of looking directly at the Sun. • Know how to protect oneself from direct sunlight. 	<input type="checkbox"/> The Sun and other stars, fires, torches and lamps all make their own light and so are examples of sources of light.
periscope	A periscope is an instrument people use to look at things from a hidden position.		<input type="checkbox"/> A mirror is not a source of light, it merely reflects light. Similarly, the Moon is not a source of light because it reflects the light from the Sun.
nocturnal	If something is nocturnal, it belongs to or is active at night. For example, bats and owls.		<input type="checkbox"/> Some animals are nocturnal. They are awake at night and can see very well in the dark. Our eyes aren't designed to see at night.
orbits	An orbit is a repeating path that one celestial body takes around another.		
convex	Convex lenses, also called positive lenses, are lenses that curve outward from the edges to the centre.		
concave	A concave lens is one where the centre of the lens is thinner than the edges.		

Scientific Enquiry: Year 3&4

Working Scientifically (Skills)

- Ask relevant questions and use different types of scientific enquiries to answer them.
- Set up simple practical enquiries, comparative and fair tests.
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- Use results to draw simple conclusions, make predictions and suggest improvements.

Investigations

How does Light Travel?

How do Shadows Change?

Choosing Materials.