



Year 3 Science Skills and Knowledge Organiser Light and Sound.

Key Knowledge and Skills	Working scientifically	Key Vocabulary	Key Questions
<p>To name a number of light sources, including the sun, stars, candle, torch, light bulb, lamp, lamp post, and mirror.</p> <p>To describe and compare some light sources (listed above)</p> <p>To state that light sources are seen when light from them enters the eyes</p> <p>To recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>To recognise that they cannot see in the dark</p> <p>To recognise that light travels from a source</p> <p>To recognise that they need light in order to see things and that dark is the absence of light</p> <p>To explain that places are dark because there is no light and a light source is needed to help us see in such places</p> <p>To notice that light is reflected from surfaces</p> <p>To state that reflections can be seen in shiny surfaces</p> <p>To demonstrate light travelling using a torch and record light bouncing off a mirror</p> <p>To identify suitable reflective clothing for travelling in the dark (link to road safety)</p> <p>To explain that they cannot see shiny objects in the dark because there are no light sources</p> <p>To recognise that when light is blocked, a shadow is formed</p>	<p>asking relevant questions and using different types of scientific enquiries to answer them</p> <p>setting up simple practical enquiries, comparative and fair tests</p> <p>making systematic and careful observations and, where appropriate, taking accurate measurements</p> <p>using standard units,</p> <p>using a range of equipment, including thermometers and data loggers</p> <p>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>identifying differences, similarities or changes related to simple scientific ideas and processes</p>	<p>Shadow</p> <p>light</p> <p>flames</p> <p>block</p> <p>direction</p> <p>light</p> <p>travels</p> <p>shortest</p> <p>longest</p> <p>highest</p> <p>torch</p> <p>shape</p> <p>similar</p> <p>sun</p> <p>object daytime</p> <p>night-time</p> <p>shine</p> <p>shiny</p> <p>surface</p> <p>mirror</p> <p>sundial</p> <p>lamp</p>	<p>What is a light source?</p> <p>How do we see things?</p> <p>How does light travel?</p> <p>How and why are shadows formed?</p> <p>Why do shadows change over time?</p> <p>How does the material of the objects effect the shadows cast?</p>



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<p>To recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>To recognise that shadows are similar in shape to the objects forming them</p> <p>To make observations of changes in shadows</p> <p>To explain that shadows are formed when light from a source is blocked</p> <p>To state that even transparent objects block some light and form shadows</p> <p>To describe the difference in shadows cast by opaque, translucent and transparent materials</p> <p>To explore how to make shadows of different shapes and sizes</p> <p>To find patterns in the way that the size of shadows change</p>	<p>Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Opaque- a material that light cannot pass through. You cannot see through it.</p> <p>Transparent- a material that is completely see through so all light can pass through it.</p> <p>Translucent-a material that is partially see through allowing some light to pass through it.</p> <p>Light source – some objects emit their own light and are sources of light.</p> <p>Reflect – when light bounces off a surface.</p>	
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