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| Unit of study: Light | | | | |
| Lesson | Learning Objectives | Science content | Learning Outcomes | Key Knowledge/Skills |
| 1 | Can I explain that I need light to see things?  Can I state natural and man-made sources of light? | Can they recognise that they need light in order to see things?  Can they recognise that dark is the absence of light? | What is light?  What is dark?  What is a source of light?  What is a natural source of light?  What is a man-made source of light? | Children to understand the difference between what light and dark is.  Children to understand what a light source is and the difference between natural and man-made sources of light.  Children to understand that the moon, a mirror and a window are not sources of light. |
| 2 | Can I understand how light travels? | Can they recognise that light appears to travel in straight lines? | Can I understand light travels in straight lines?  Can I understand what opaque, translucent and transparent mean?  Can I identify materials which are opaque, transparent and translucent? | Children need to know that light travels in straight lines.  Children need to know the difference between opaque, transparent and translucent.  Children to identify materials which are opaque, transparent and opaque. |
| 3 | Can I label a diagram of an eye?  Can I explain that light travels in straight lines from light sources to our eyes, and from light sources to objects and then to our eyes? | Can they use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye?  Can they explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes? | Can I label a diagram of an eye?  Can I draw a diagram showing how we see objects?  Can I understand that light travels in straight lines?  Can I understand that light reflects off an object? | Light travels from a light source, reflects off an object and into our eyes for us to see something.  Light travels in straight lines. |
| 4 | Can I understand how mirrors reflect light, and how they can help us see objects? | Can they use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye?  Can they explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes? | Can I make a prediction of how we see something with a mirror?  Can I understand that light travels in straight lines?  Can I understand that light reflects off an object? | To understand how we see an object when light reflects off an object. |
| 5 and 6 | Can I explain why shadows have the same shape as the object that casts them? | Can they use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them?  Can they explain why their shadow changes when the light source is moved closer or further from the object?  *Can they explore different ways to test an idea, choose the best way, and give reasons?*  *Can they vary one factor whilst keeping the others the same in an experiment?*  *Can they explain why they do this? Can they plan and carry out an investigation by controlling variables fairly and accurately?*  *Can they make a prediction with reasons?*  *Can they use information to help make a prediction?*  *Can they use test results to make further predictions and set up further comparative tests?*  *Can they present a report of their findings through writing, display and presentation?* | Can I state what opaque, translucent and transparent mean?  Can I explain what happens to a shape when the light source is moved closer to an object?  Can I make a prediction?  Can I set up a fair test?  Can I display my findings? | Children to learn that when a light source is closer to an object the shadow will be bigger. |
| 7 | Can I research and find out about a famous scientist? | Can they present a report of their findings through writing, display and presentation? | Can I research a famous inventor/scientist and state why they are famous?  Can I state how their invention helped the world? | Children to know that Percy Shaw created the cats eye to help road users drive carefully at night. |