

### Progression of skills, knowledge and understanding: Light

- National curriculum level statements
  - Additional statements from QCA (2003)

Level	Characteristic of level
1	<ul style="list-style-type: none"> <li>• Communicate <b>observations</b> of changes in light that result from actions.</li> <li>• <i>Recognise</i> that light comes from a <b>variety of sources</b> and <i>name</i> some of these               <ul style="list-style-type: none"> <li>➤ Know that some light can be <b>turned on and off</b>.</li> </ul> </li> </ul>
2	<ul style="list-style-type: none"> <li>• Know about a range of physical phenomena and <i>recognise and describe similarities and differences</i> associated with them.</li> <li>• <i>Compare</i> the <b>brightness or colour</b> of lights.               <ul style="list-style-type: none"> <li>➤ Know that darkness comes from the <b>exclusion of light</b>.</li> <li>➤ Understand that <b>all light has a source</b>.</li> <li>➤ Know that <b>light passes through some materials but not others</b>.</li> <li>➤ <i>Demonstrate</i> how to <b>block light</b> with some materials.</li> <li>➤ Identify changes that occur when the Sun goes behind a cloud.</li> </ul> </li> </ul>
3	<ul style="list-style-type: none"> <li>• Use their knowledge and understanding of physical phenomena <i>to link cause and effect in simple explanations</i>.</li> <li>• Begin to make <i>simple generalisations</i> about physical phenomena               <ul style="list-style-type: none"> <li>➤ Understand that <b>light travels</b>.</li> <li>➤ Understand that light coloured objects are not light sources.</li> <li>➤ Know that <b>light travels through some materials and is blocked by others</b>.</li> <li>➤ Understand that, <b>in darkness, only light sources can be seen</b>.</li> </ul> </li> </ul>
4	<ul style="list-style-type: none"> <li>• <i>Describe and explain</i> physical phenomena (e.g. how the apparent position of the Sun changes over the course</li> </ul>

	<p>of a day.)</p> <ul style="list-style-type: none"> <li>• <i>Use physical ideas to explain</i> simple phenomena ( e.g. the formation of shadows) <ul style="list-style-type: none"> <li>➤ Use the idea that <b>light travels to explain phenomena.</b></li> <li>➤ Understand that <b>light travels from light sources to the eye enabling them to be seen.</b></li> <li>➤ Use the term '<b>transparent</b>' and '<b>opaque</b>' appropriately.</li> <li>➤ Know that <b>many transparent materials can produce faint shadows.</b></li> <li>➤ Know that <b>differently shaped and sized shadows can be produced from a single object.</b></li> <li>➤ Know that <b>shiny objects reflect light</b> and that this accounts for their shiny appearance.</li> <li>➤ Know that the <b>relative positions of source, object and shadow</b></li> <li>➤ Know that the <b>shape of the shadow is determined by the shape of the object.</b></li> <li>➤ Know that <b>shadows show shape but not other features</b> of the objects.</li> <li>➤ Understand the idea of <b>translucence.</b></li> </ul> </li> </ul>
5	<ul style="list-style-type: none"> <li>• <i>Use some abstract ideas in descriptions</i> of familiar phenomena (e.g. objects are seen when light from them enters the eye) <ul style="list-style-type: none"> <li>➤ <i>Describe</i> reflection as light '<b>bouncing off</b>' objects.</li> <li>➤ Understand that, <b>in order to be seen, all non-luminous objects must reflect light.</b></li> <li>➤ <i>Describe</i> the <b>relationship between the size of the shadow and the distance between the light source and an object.</b></li> <li>➤ Know that, when <b>sunlight passes through some objects, coloured light is produced.</b></li> </ul> </li> </ul>