


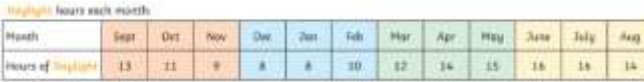


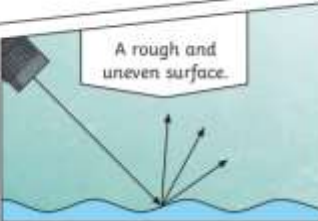
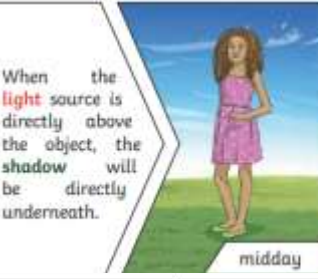












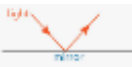


Year 3 Autumn 2- Light and Shadows- Can you have shadows without light?

Key Vocabulary		Prior knowledge	Sticky Knowledge																														
Light 	A form of energy that travels in a wave from a source.	In Reception: <ul style="list-style-type: none"> learnt about light and where it comes from. In year 1 we: <ul style="list-style-type: none"> Observed changes across the four seasons Observed and described weather associated with the seasons and how day length varies. <div style="text-align: center;">  <p>The Four Seasons</p> <table border="1" style="margin: auto;"> <tr> <td style="background-color: #f4a460;">autumn September October November</td> <td style="background-color: #a4c639;">winter December January February</td> </tr> <tr> <td style="background-color: #a4d9b5;">spring March April May</td> <td style="background-color: #f4e060;">summer June July August</td> </tr> </table> </div> <div style="text-align: center;">  <p>Temperature - how hot or cold it is Sunshine - how sunny it is Rainfall - how much rain there is Wind direction - which way the wind is blowing Wind force - how strong the wind is Cloud cover - how dark the clouds will be</p> </div> <div style="text-align: center;">  <table border="1" style="margin: auto;"> <thead> <tr> <th>Month</th> <th>Sept</th> <th>Oct</th> <th>Nov</th> <th>Dec</th> <th>Jan</th> <th>Feb</th> <th>Mar</th> <th>Apr</th> <th>May</th> <th>June</th> <th>July</th> <th>Aug</th> </tr> </thead> <tbody> <tr> <td>Hours of daylight</td> <td>13</td> <td>11</td> <td>9</td> <td>8</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> <td>15</td> <td>16</td> <td>16</td> <td>14</td> </tr> </tbody> </table> </div>	autumn September October November	winter December January February	spring March April May	summer June July August	Month	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Hours of daylight	13	11	9	8	8	10	12	14	15	16	16	14	We need light to be able to see things. Light travels in a straight line. When light hits an object, it is reflected (bounces off). If the reflected light hits our eyes, we can see the object. Some surfaces and materials reflect light well. Other materials do not reflect light well. Reflective surfaces and materials can be very useful... <div style="text-align: center;">  <p>hi-vis jacket cat's eyes</p> </div> <p style="text-align: center;">The surfaces that reflect light best are smooth, shiny and flat.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>A smooth, shiny, flat surface.</p> </div> <div style="text-align: center;">  <p>A rough and uneven surface.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>When the light source is directly above the object, the shadow will be directly underneath.</p> <p>midday</p> </div> <div style="text-align: center;">  <p>When a light source is to one side of an object, the shadow will appear on the opposite side. The shadow will also be longer.</p> <p>sunset</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>opaque</p> </div> <div style="text-align: center;">  <p>translucent</p> </div> <div style="text-align: center;">  <p>transparent</p> </div> </div>
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Light source 	An object that makes its own light.																																
Dark 	The absence of light.																																
Reflection 	The process where light hits the surface of an object and bounces back into our eyes,																																
Shadow 	An area of darkness where light has been blocked.																																
Ray 	Waves of light are called light rays.																																
Opaque 	Describes objects that do not let any light pass through them.																																
Transparent 	Describes objects that let light travel through them easily, meaning that you can see through an object.																																
Translucent 	Describes objects that let some light through, but scatter the light so we can't see through them properly.																																
Reflect 	To bounce off.																																

Knowledge and Assessment

- 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 shadows are formed when the light from a light source is blocked by a solid object.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Find patterns in the way that the size of shadows change