Key Vocabulary and Definitions:

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| Light A light bulb with a cork  Description automatically generated | A type of energy that makes it possible for us to see the world around us. |
| Light sourceA light bulb and a candle  Description automatically generated  | Anything that makes light, whether natural or artificial. |
| Opaque A blue and black logo  Description automatically generated | Objects which do not allow any light to pass through. You cannot see through it at all. |
| Reflection  | The bouncing back of light when it hits an object with a very smooth and shiny surface, like a mirror. |
| RefractionA blue rectangle with black arrows  Description automatically generated | The bending of light as it passes from one transparent substance to another, like air to water, is called refraction. |
| Shadow  | Created when an opaque object blocks the light source. |
| Translucent  | Objects which allow only part of the light to pass through so the image is not very clear |
| Transparent  | Objects which light rays pass through it. You can see through it clearly. |

What should I already know?

* Explore how things work. (Nursery – Light)

• Talk about the differences in materials and changes they notice. (Nursery – Light)

• Describe what they see, hear and feel whilst outside. (Reception – Light)

• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)

• Describe the simple physical properties of a variety of everyday materials. (Y1 - Materials)

Scientific knowledge:

1. Recognise that they need light in order to see things, and that dark is the absence of light.
2. Notice that light is reflected from surfaces.
3. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
4. Recognise that shadows are formed when the light from a light source is blocked by an opaque object.
5. Find patterns in the way that the size of shadows change.

Teaching Sequence

1. To discover through investigation what light and dark are.
2. To notice that light is reflected from surfaces.
3. To recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
4. To understand that shadows are formed when the light from a light source is blocked by a solid object. (TAPS)
5. To investigate the way the size of shadows change.



Blooms Taxonomy – Specific Verbs to Use in Lesson Aims

Knowledge: Describe, find, identify, list, locate, name, recognise, retrieve Comprehension: Classify, compare, explain, infer, interpret, paraphrase, summarise Application: Carry out, implement, use Analysis: Deconstruct, Organise, outline, structure Synthesis: Construct, design, devise, invent, make, plan, produce, Evaluation: Appraise, assess, choose,

Key Knowledge

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| Term 5 | Let’s Talk (Explorify) | Scientific Knowledge | Scientific Skill |
| Lesson 1 | Have you ever?https://explorify.uk/en/activities/have-you-ever/been-somewhere-where-you-couldnt-see-anything-when-you-woke-up-in-the-night | 1. Recognise that they need light in order to see things, and that dark is the absence of light. | **Observe and Measure** |
| Lesson 2 | Odd one outhttps://explorify.uk/en/activities/odd-one-out/sources-of-light | 2. Notice that light is reflected from surfaces. | **Observe and Measure****Interpret and report** |
| Lesson 3 | The big questionhttps://explorify.uk/en/activities/the-big-question/how-can-astronauts-protect-themselves-from-the-sun-when-visiting-mars | 3. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. | **Observe and Measure****Interpret and Report** |
| Lesson 4TAPs | What’s going on?https://explorify.uk/en/activities/whats-going-on/shadow-shapes | 4. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. | **Observe and Measure****Record** (TAPS) |
| Lesson 5 | Odd one out<https://explorify.uk/en/activities/odd-one-out/in-the-shade> | 5. Find patterns in the way that the size of shadows change. | **Observe and Measure** |