

## Knowledge Organiser Science – Light and Shadows

### What should I already know?

- To be able to identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
- To be able to describe the simple physical properties of variety of everyday materials.

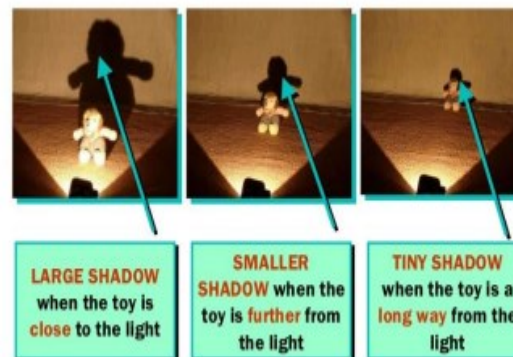
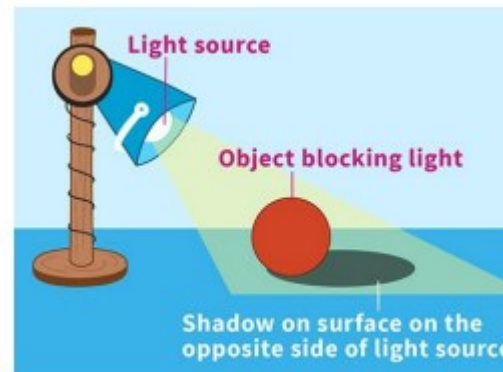
### Key Vocabulary

|                  |   |
|------------------|---|
| Light            | A form of energy that travels in a wave from a source.  |
| Light source     | An object that makes its own light.   |
| Dark             | The absence of light  |
| Absence of light | Light is not there.   |
| Transparent      | Describes objects that let light travel through them easily, meaning you can see through the object.                |
| Translucent      | Describes objects that things let some light through, but scatters the light so we can't see through them properly. |
| Opaque           | Describes objects that do not let any light pass through them.  |
| Shiny            | Bright or glossy in appearance.   |
| Matt             | A surface that is dull in appearance, without a shine.  |
| Surface          | <b>The outer layer of an object</b>   |
| Shadow           | An area of darkness where light has been blocked.   |
| Reflect          | When a light hits a surface and 'bounces' off   |
| Mirror           | A smooth surface that shows images of the objects near it.  |
| Sunlight         | Light from the sun.   |
| Dangerous        | Something that could hurt or harm you.  |

### Useful Diagrams



### How a shadow is formed



### Sticky Knowledge

- We see objects because our eyes can sense light.
- Dark is the absence of light. We cannot see anything in complete darkness.
- Some objects, for example, the sun, light bulbs and candles are sources of light. Objects are easier to see if there is more light.
- Some surfaces reflect light.
- Objects are easier to see when there is less light if they are reflective.
- The light from the sun can damage our eyes and therefore we should not look directly at the sun and can protect our eyes by wearing sunglasses or sunhats in bright light.
- Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light.
- The size of a shadow depends on the position of the source, object and surface.