

# SCIENCE: HOW DOES YOUR GARDEN GROW? (LIGHT AND SHADOWS)

Key Vocabulary: light, dark, shadow, mirror, bright, dim, reflect, eye, opaque, transparent, translucent, ultraviolet, ray, beam, absorb, luminous, non-luminous, infrared

## Working Scientifically

When working scientifically children will ask and answer their own questions about plants through classifying, observing over time, conducting fair test investigations and using secondary sources. They will have opportunities to make and record detailed observations using labelled and annotated diagrams.

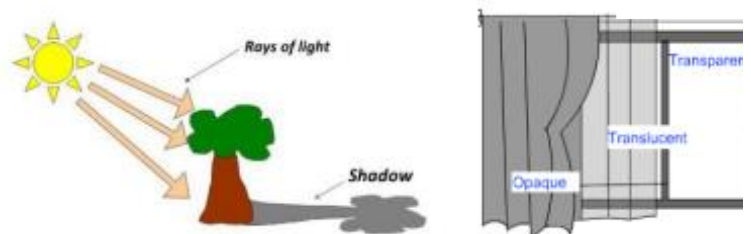
## Must – know knowledge

- Certain things produce light, usually by burning (e.g. the Sun) or electricity (e.g. street lights).
- Shiny materials do not make light but do reflect it.
- Shadows are caused when certain materials block light.
- We must never look directly at the Sun as the light produced is very bright and can be harmful to our eyes. This is why we wear sunglasses.
- We need light so that we are able to see in the dark.
- This is because the dark is the absence of light. The Sun and stars always give us light but we can only see the stars when it is dark.
- At night time we cannot see the Sun's light as the Earth turns and our part of the Earth is not lit up by the Sun at night.
- The Moon is not a source of light even though we can see it in the dark. This is because the Sun's light reflects on the surface of the Moon making it appear as though the Moon emits light.
- Shiny things are not light sources - they appear to be sources of light as they are bright.

## Diagram: Light Sources



## Diagram: How are shadows formed?



Experiments: Observing how shadows can be made longer or shorter, observing whether it's easier to see bright objects or dim ones.