

Knowledge organiser for Year 3 Science Topic: Light and Dark

Key Ideas:

- 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 light from the sun can be dangerous and importance of protection
- Recognise that shadows are formed when the light from a light source is blocked
- Find patterns in the way that the size of shadows change

Key Vocabulary:

Light source	An object that produces its own light (e.g. sun, fire).
Reflection	When a light hits a surface and 'bounces' off.
Refraction	When light passes through a different object and its direction changes.
Opaque	An object which does not allow light to pass through it (e.g. wood).
Translucent	An object which allows some light to pass through it. It may be possible to see some unclear images through the object (e.g. tissue paper).
Transparent	An object which allows light to pass through it so that objects behind it can be easily seen (e.g. glass).
Shadow	A dark area or shape caused by the blockage of light
Stamen	The male part of a plant. Consists of the anther (produces pollen) and the filament (which holds the anther up).
Pistil	The female part of a plant. Made up of the stigma , style and ovary (which contains the egg cells called ovules).
Pollen	The product of a male part of a plant which allows it to produce seeds
Pollination	The process by which pollen is transferred to the female parts of the plant which means the plants can make seeds and reproduce
Fertilisation	When pollen joins with the ovule (egg), a new seed is created
Seed dispersal	The movement or transport of seeds away from the parent plant.
Photosynthesis	The process by which green plants use the sun's energy from sunlight along with water and carbon dioxide to produce their own food in the form of glucose (sugar).

Key Facts:

Darkness is caused by an absence of light.

Light can come from a range of different sources.

The shape and size of a shadow can be altered depending on the angle of and distance between the light source and object.

UV rays from sunlight can be harmful which is why you must protect yourself appropriately.

Light travels in a straight line.

Example: light travelling and reflecting from a smooth surface.



Example: light travelling and reflecting from a rough surface.



LARGE SHADOW
when the toy is
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SMALLER SHADOW
when the toy is further from
the light

TINY SHADOW
when the toy is a
long way from the
light