



Knowledge Organiser

Year 3 (Science)

Light



KEY VOCABULARY AND SPELLINGS

Light Source – an object that emits its own light

Emits – to emit light means to produce it

Opaque – you cannot see through it

Transparent – you can see through it

Translucent – some light can pass through it

Reflects – when a light ray hits a surface and bounces off

Shadow - a dark shape that appears on a surface when something stands between the light source and the surface

LIGHT AND DARK - We need light so that we are able to see.

Dark is the absence of light.

A light source can emit light by burning, electricity or chemical reactions, some examples include:

Burning – sun, flames from a fire, stars.

Electricity – lamps, car headlights, street lights.

Chemical Reactions – light is a product of the reaction e.g. glow sticks.

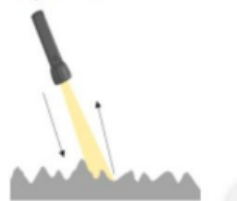
REFLECTION - When light from an object is reflected by a surface, it changes direction. It bounces off at the same angle it hits it.

Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.

Example: light travelling and reflecting from a smooth surface.

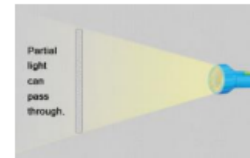
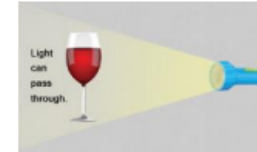


Example: light travelling and reflecting from a rough surface.



TRANSPARENT – a material through which light can pass completely. They are also called see-through objects.

EXAMPLES: window, fish tank, glass

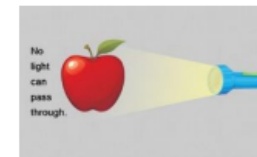


TRANSLUCENT – a material through which light can pass partially, we can partly see through these objects.

EXAMPLES: coloured plastic bottle, jelly, tracing paper, coloured balloon.

OPAQUE – a material which light cannot pass through at all.

EXAMPLES: cardboard, metal, telephone, flower pot.



SHADOWS When light is blocked by an opaque object a dark shadow is formed.

The size of the shadow changes as the light source moves, the further away from the light source the smaller the shadow is and the closer the light source is to the object the bigger the shadow.

The angle of the light source also makes a difference to the size of the shadow.

