

## YEAR 6 LIGHT KNOWLEDGE ORGANISER

### 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.

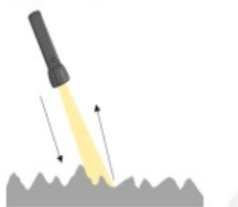
**REFLECTION** - When light from an object is reflected by a surface, it changes direction. It bounces off at the same angle it hits it.

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.

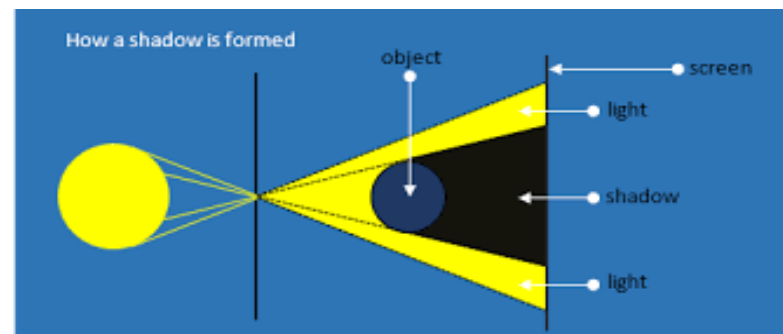
Example: light travelling and reflecting from a smooth surface.



Example: light travelling and reflecting from a rough surface.



**SHADOWS** – Light travels in straight lines. This leads to shadows being formed because, if an object is in the way, the light will move in a straight line past it rather than surrounding it.



The shadow's shape will be the same as the object which has blocked the light.



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.

