

Alder Coppice Primary School Knowledge Organiser

Subject: Science

Year: 3

Unit 6: Light

What I Should Already

The sun is a source of light

We have more sun in the months of Spring and Summer than we do in Autumn and Winter.

Skills and Enquiry:

1. How does light travel?

2. How do we see?

3. What makes a shadow?

4. How do shadows change because of the position of the sun?

5. How can we change the size of shadows?

Unit Specific Vocabulary:

man-made – not created naturally

midday – the middle part of the day, sometimes called **noon**

natural – not made by man

opaque – an opaque object will not allow light through.

penumbra – the lighter part of a shadow around the edges

reflect – to bounce off

sun – the star which Earth travels around

translucent – a material which will allow some light through

transparent – a material that will allow all light through.

umbra – the centre and darkest part of the shadow

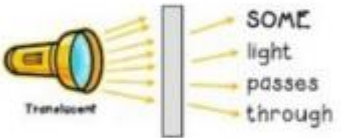
What I should know by the end of this Unit:

- That we need light in order to see things.
- That dark is the absence of light.
- Light is reflected from surfaces.
- Light from the sun can be dangerous and that there are ways to protect our eyes.
- Shadows are formed when the light from a light source is blocked by an opaque object.
- There are patterns in the way that the size of shadows change.
- Shadows change depending upon the position of the sun in the sky.

Key Facts:



Transparent



Translucent



Opaque

Light is a type of energy that lets us see things

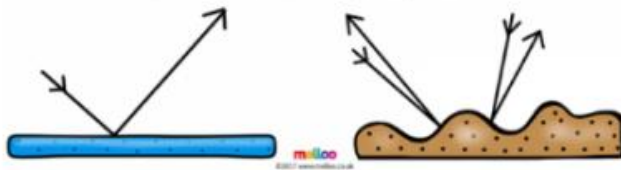


If there is no light then it is dark and we cannot see anything



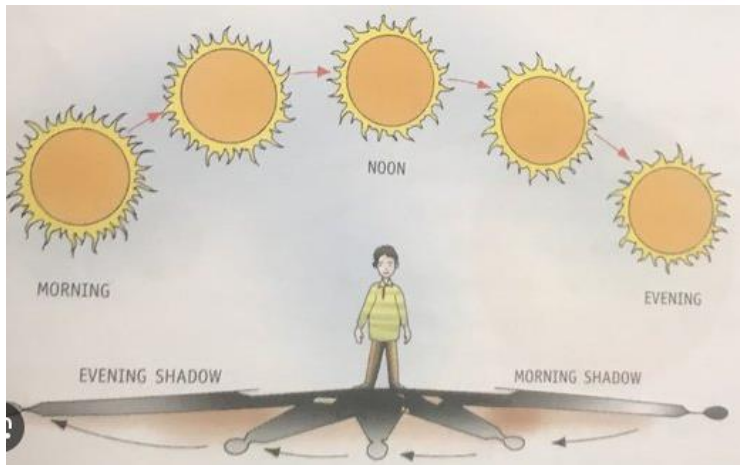
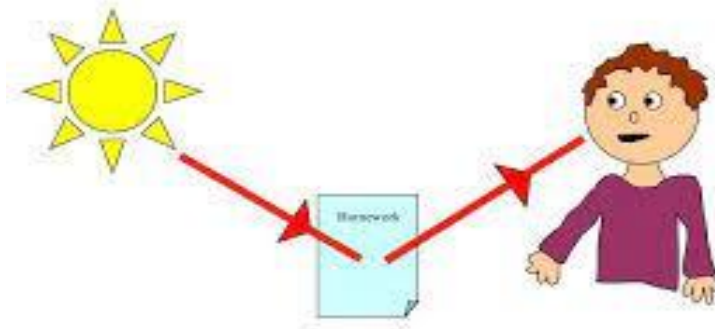
Reflection

When a beam of light is reflected from a surface, it changes direction. Smooth, shiny surfaces such as polished metals reflect light well. Rough and dark surfaces do not reflect light well.



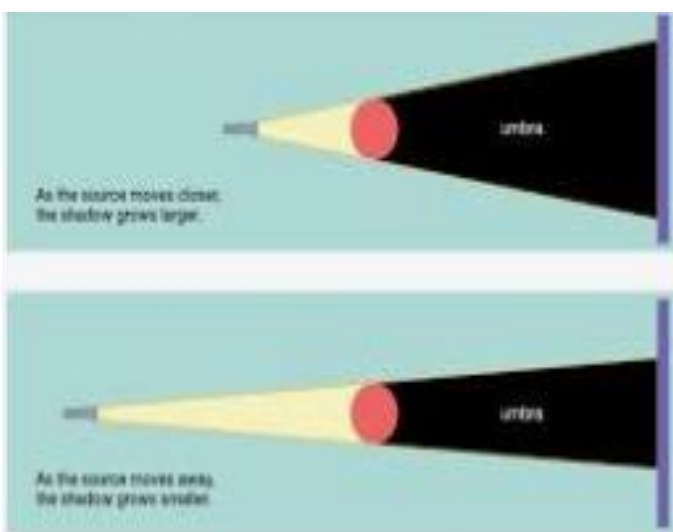
There are many sources of light, both natural and man-made.

We see things because they reflect light into our eyes:



Shadows change because of the Earth's movement. When the sun rises and sets, shadows are longer.

They are at their shortest during the middle of the day when the sun is at its highest point in the sky.



We can change the size of shadows by moving the object or by moving the source of light.