

How does light reflect off surfaces and form shadows?

What I already know:

- The four seasons of a year.
- How to observe and describe the weather associated with each season and how day length varies.
- How shadows are formed.
- The names and properties of some everyday materials.

New knowledge:

- There must be light for us to see; without light we cannot see through dark.
- We need light to see things, even shiny things.
- Transparent materials let light through. Opaque materials do not let light through.
- Beams of light bounce off some materials (reflection).
- Smooth, shiny materials reflect light beams better than bumpy, non-shiny materials.
- Light comes from a source.
- Reflective materials can be very useful e.g. cat's eyes, hi-vis jacket.
- Lewis Latimer was an American scientist who helped develop the electric lightbulb.

Enquiry questions:

- What is light?
- Which surfaces reflect light?
- How do mirrors reflect light?
- How can we change the darkness, size and shape of a shadow?
- How can coloured filters change a beam of light?

Scientific skills:

- Asking questions and using different types of enquiries to answer them.
- Making systematic and careful observations.
- Using results to draw conclusions.
- Recording findings using scientific language.
- Identifying differences, similarities and changes.

Vocabulary:

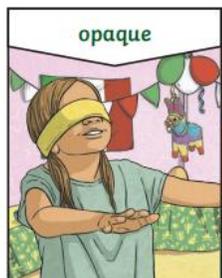
dark	Dark is the absence of light.
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light, for example the Sun.
opaque	If an object is opaque , it does not let any light pass through it.
reflection	The process where light hits the surface of an object and bounces back into our eyes.
reflective	A word to describe something which reflects light well.
shadow	An area of darkness where light has been blocked.
surface	The top layer of something (the surface of a table).
translucent	If an object is translucent , it lets some light through but the light is scattered so we can't see through the object properly.
transparent	If an object is transparent , it lets light travel through it easily, meaning that you can see through the object.



Asking questions



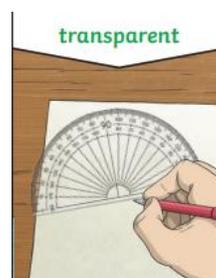
Making predictions



Observing and measuring



Setting up tests



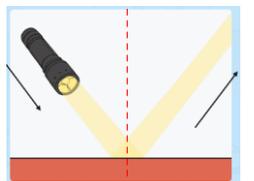
Recording data



Interpreting and communicating results



Evaluating



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