

Light Checklist

This is the overview of what you need to know about light.

The statements marked * are the harder ones. This doesn't mean you shouldn't try them, just don't panic too much if you find them more difficult. This is because they are!

Luminous Object

Know what the words opaque, transparent and translucent mean.

Understand the difference between luminous and non-luminous objects and be able to name some.

Draw a diagram explaining how we see things.

Reflection

You should be able to measure angles.

Know the law of reflection and be able to describe an experiment that proves it.

Remember that light travels very, very fast and in straight lines.

Refraction

Remember that light changes direction when it crosses a boundary into a more dense medium (i.e. stuff)

Recall which way light bends when it goes from more dense to less dense etc.

Be able to draw the standard diagram of light travelling through a glass block.

Explain why light changes direction as it crosses boundaries.

Use a model to explain the principle of refraction (this is Postman Pat in his van crossing over the sandpaper, or something like it)

Lenses

Describe different shapes of lenses.

Be able to draw the diagrams of how light travels through converging and diverging lenses. (not the really hard one where you have to draw it all properly, just the general overview one.)

Dispersion

Know what the word dispersion means.

Describe how a prism affects white light.

Be able to name all the colours in the spectrum, in order.

*Explain why the white light splits when it goes through the prism.

Understand how a rainbow is formed.

The Eye

Describe how a human eye works and be able to name key parts. You only need to know

- cornea
- iris
- pupil
- retina
- optic nerve
- lens
- ciliary muscles

Understand what happens when people are long or short sighted.

*Explain which type of lens is needed to correct the vision.

Colours

Describe how we can see colours.

*Explain how filters and coloured objects transmit or reflect some colours and absorb others.

*Describe how the appearance of coloured objects is affected by coloured lights and coloured filters.