

Learning checklist Energy 2

Level 4

I know that sounds are made by vibrating objects.

I know that sound becomes fainter further away from the source because energy dissipates or spreads out.

I know that sounds travel at different speeds in solids, liquids and gases.

I can explain how shadows form.

I know that light travels much faster than sound.

I can describe how light is reflected at plane (flat) surfaces.

I know that filters and coloured objects absorb some colours (and transmit or reflect others).

I know that light travels from light sources to our eyes so we can see them.

Level 5

I know how to calculate the speed of sound.

I know what an echo is and I can explain what causes it.

I can explain **two** ways of changing the size of a shadow.

I can describe how light is refracted at plane (flat) surfaces.

I can describe how curved mirrors work.

I can describe how a prism affects white light.

I can describe what effect coloured filters and coloured light have on coloured objects.

I know that we see objects' reflected light.

I can give **two** examples of how colour is useful in everyday life.

I know the main parts of the eye and can label them on a diagram.

Level 6

I know the difference between a compression and rarefaction.

I can give some uses of an ultrasound

I can demonstrate the Law of reflection at plane (flat) surfaces.

I can describe total internal reflection.

I can recognise refraction and dispersion and I can give examples of each.

I can explain how the eye works.

Level 7

I can use a model ear to describe some possible causes of hearing impairment.

I know how convex lenses and concave lenses work.

I can explain why coloured objects look different in coloured lights.

I know that how much light refracts depends on its colour.

Level 8

I can explain using ideas about energy transfer, the dissipation of heat and sound during transfer processes.

I can describe the different parts of the electromagnetic spectrum.