

8Ja – Seeing things

Word	Pronunciation	Meaning
absorb		'To soak up' or 'to take in'.
image		A picture that forms in a mirror or on a screen, or is made by a lens. You see an image when looking down a microscope.
longitudinal wave	<i>long-it-tyewd-in-al</i>	A wave where the particles vibrate in the same direction as the wave is travelling.
matter		All things are made of matter. There are three states of matter: solid, liquid, gas.
opaque	<i>o-payk</i>	Material that does not let light through. It is not possible to see through an opaque substance.
pinhole camera		A piece of apparatus that forms an image of an object on a screen when light rays travel through a tiny hole in the front.
ray		A narrow beam of light, or an arrow on a diagram representing the path of light and the direction in which it is travelling.
reflect		To bounce off a surface instead of passing through it or being absorbed.
reflected ray		A ray of light bouncing off a mirror.
shadow		A place where light cannot get to, because an opaque object is blocking the light.
source		Where a sound wave or other wave begins.
translucent	<i>trans-loo-sent</i>	Material that lets light through but scatters it. You cannot see things clearly through translucent materials.
transmit		To pass through a substance.
transparent		A material that light can travel through without scattering. (Note: transparent substances may be coloured or colourless.)
transverse wave		A wave where the vibrations are at right angles to the direction the wave is travelling.
vacuum	<i>vak-yoom</i>	A completely empty space, containing no particles.

8Jb – Drawing and conventions (WS)

Word	Pronunciation	Meaning
angle of incidence	<i>in-sid-dense</i>	The angle between an incoming light ray and the normal.
angle of reflection		The angle between the normal and the ray of light leaving a mirror.
convention		A standard way of doing something or representing something, so that everyone understands what is meant.
incident ray		A ray of light going towards the mirror or other object.
normal		An imaginary line at right angles to the surface of a mirror or other object where a ray of light hits it.
plane mirror		A smooth, flat mirror.
ray box		A piece of equipment that produces a narrow beam of light.

Word	Pronunciation	Meaning
ray diagram		A diagram that represents the path of light using arrows.
ray tracing		A method of investigating what happens to light by marking the path of a light ray.
reflected ray		A ray of light bouncing off a mirror.

8Jb – Reflection

Word	Pronunciation	Meaning
diffuse reflection	<i>di-fuse</i>	Reflection from a rough surface, where the reflected light is scattered in all directions.
law of reflection		The angle of incidence is equal to the angle of reflection.
specular reflection	<i>speck-you-lar</i>	When light is reflected evenly, so that all reflected light goes off in the same direction. Mirrors produce specular reflection.

8Jc – Refraction

Word	Pronunciation	Meaning
angle of refraction		The angle between the normal and a ray of light that has been refracted.
converging lens		A lens that makes rays of light come together.
focal length		The distance between the centre of the lens and the focal point.
focal point		The place where parallel rays of light are brought together by a converging lens.
interface		The boundary between two materials.
lens		A curved piece of glass or other transparent material that can change the direction of rays of light.
refraction		The change in direction when light goes from one transparent material to another.

8Jd – Cameras and eyes

Word	Pronunciation	Meaning
aperture		A hole in a camera that controls how much light goes to the sensor.
cone cell		A cell in the retina that detects different colours of light.
cornea		The transparent front part of the eye, which covers the iris and pupil.
digital camera		A camera that uses electronics to record an image.
iris		The coloured part of the eye.
memory card		Part of a digital camera that stores the images.
optic nerve		The nerve that takes impulses from the retina to the brain.
primary colour		One of three colours that are detected by the cone cells in our eyes. The primary colours are red, green and blue.

Word	Pronunciation	Meaning
pupil		The hole in the front of the eye that light can pass through.
retina		The part at the back of the eye that changes energy transferred by light into nerve impulses.
rod cell		A cell in the retina that detects low levels of light. It cannot detect different colours.
secondary colour		A colour made when two primary colours mix. The secondary colours are magenta, cyan and yellow.
sensor		An instrument that detects something. In a digital camera, the sensors detect light and change it to electrical signals.
shutter		A device that shields and protects the sensor in a digital camera. It opens when the picture is taken.

8Jd Lit – Giving a presentation

Word	Pronunciation	Meaning
scientific conference		A place where a lot of scientists gather together to hear about each other's ideas and to discuss them.
visual aid		Something that can be looked at during a presentation or lesson to help an explanation or provide further information. Examples include posters and computer presentations.

8Je – Colour

Word	Pronunciation	Meaning
dispersion		The separating of the colours in light, for example when white light passes through a prism.
filter (physics)		Something that only lets certain colours through and absorbs the rest.
frequency	<i>free-kwen-see</i>	The number of vibrations (or the number of waves) per second. Different frequencies of light have different colours.
prism		A block of clear, colourless glass or plastic. Usually triangular.
spectrum		The seven colours that make up white light.
white light		Normal daylight, or the light from light bulbs, is white light.