Wave phenomena

International Baccalaureate · IB Diploma · Physics · HL ·
Vocabulary in context

Word	Example
wavefront /ˈweɪvfrʌnt/	Each **wavefront** joins points on the same crest.
ray	A **ray** shows the direction of the wave.
boundary /ˈbaʊndəri/	The **boundary** between air and glass bends the light.
reflection /rɪˈflekʃn/	**Reflection** in a mirror lets you see yourself.
normal /ˈnɔːml/	The **normal** is a line at 90° to the surface. 90°
transmission /trænˈsmɪʃn/	**Transmission** means the wave passes through.
refraction /rɪˈfrækʃn/	**Refraction** makes a straw look bent in water.
refractive index /rɪˈfræktɪv ˈɪndeks/	Glass has a **refractive index** of 1.5. 1.5
Snell's law /snelz lɔː/	**Snell's law** links the angles of the rays.
critical angle /ˈkrɪtɪkl ˈæŋgl/	The **critical angle** for glass is about 42°. 42°
total internal reflection /ˈtəʊtl ɪnˈtɜːnl rɪˈflekʃn/	**Total internal reflection** keeps light inside an optical fibre.
optical fibre /ˈɒptɪkl ˈfaɪbə/	An **optical fibre** carries internet data as light.
diffraction /dɪˈfrækʃn/	**Diffraction** lets you hear sound around a corner.

exercises.lol exercises.com.cn

Word	Example
aperture	Light spreads out through a narrow **aperture**.
principle of superposition /ˈprɪnsɪpl ɒv ˌsuːpəpəˈzɪʃn/	The **principle of superposition** says we add the waves.
pulse /pʌls/	A quick flick sends a **pulse** along the rope.
interference /ˌɪntəˈfɪərəns/	**Interference** makes loud and quiet places in a room.
coherent /kəʊˈhɪərənt/	Two **coherent** sources have the same frequency.
path difference /pæθ ˈdɪfrəns/	A **path difference** of one wavelength gives a bright fringe.
constructive interference /kənˈstrʌktɪv ˌɪntəˈfɪərəns/	Two crests meet and give **constructive interference**.
destructive interference /dɪˈstrʌktɪv ˌɪntəˈfɪərəns/	A crest and a trough meet and give **destructive interference**.
fringe /frɪndʒ/	Each bright **fringe** is a place where the waves add.
fringe separation	The **fringe separation** is 2 mm. 2 mm
envelope /ˈenvələʊp/	The **envelope** shows the size of the waves.
modulate	A radio station can **modulate** a wave to carry music.
diffraction grating /dɪˈfrækʃn ˈgreɪtɪŋ/	A **diffraction grating** splits white light into colours.
spectrum /ˈspektrəm/	A prism splits light into a **spectrum**.