Superposition

A-Level Physics · Vocabulary in context

Word	Example
principle of superposition /ˈprɪnsɪpl ɒv ˌsuːpəpəˈzɪʃn/	The **principle of superposition** says we add the two waves.
superposition /ˌsuːpəpəˈzɪʃn/	When two waves meet, **superposition** adds them together.
wave /weɪv/	A **wave** moves across the water.
displacement /dɪˈspleɪsmənt/	After walking 3 km east, your **displacement** is 3 km east.
vector sum /ˈvektə sʌm/	The resultant is the **vector sum** of the two forces.
amplitude /ˈæmplɪtjuːd/	A loud sound has a large **amplitude**.
coherent /kəʊˈhɪərənt/	Two waves from one laser are **coherent**.
in phase /ɪn feɪz/	The two points move up and down together: they are **in phase**.
crest /krest/	The **crest** is the top of the wave.
constructive interference /kənˈstrʌktɪv ˌɪntəˈfɪərəns/	Two crests meet and give **constructive interference**.
interference /ˌɪntəˈfɪərəns/	**Interference** makes loud and quiet places in a room.
trough /trɒf/	The **trough** is the lowest point of the wave.
phase difference /feɪz ˈdɪfrəns/	The two waves have a **phase difference** of half a cycle.

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destructive interference /dɪˈstrʌktɪv ˌɪntəˈfɪərəns/	A crest and a trough meet and give **destructive interference**.
intensity /ɪnˈtensɪti/	The **intensity** of light is less far from the lamp.
antiphase /ˌæntɪˈfeɪz/	The two waves are in **antiphase**: one goes up as the other goes down.
node /nəʊd/	A **node** on the string does not move.
progressive wave /prəˈgresɪv weɪv/	A **progressive wave** carries energy from one place to another.
stationary wave /ˈsteɪʃənəri weɪv/	A guitar string makes a **stationary wave**.
reflected /rɪˈflektɪd/	The wave is **reflected** at the end of the string.
wavelength /ˈweɪvleŋθ/	The **wavelength** is the distance from one crest to the next.
maximum /ˈmæksɪməm/	The sound is loudest at a **maximum**.
antinode /ˌæntɪˈnəʊd/	The string moves most at an **antinode**.
fundamental /ˌfʌndəˈmentl/	The **fundamental** is the lowest note the string can play.
energy /ˈenədʒi/	Food gives your body the **energy** it needs to move.
resonance tube /ˈrezənəns tjuːb/	The sound is loudest when the **resonance tube** is the right length.
minimum /ˈmɪnɪməm/	The sound is quietest at a **minimum**.

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diffraction /dɪˈfrækʃn/	**Diffraction** lets you hear sound around a corner.
obstacle /ˈɒbstəkl/	The waves spread out behind the **obstacle**.
ripple tank /ˈrɪpl tæŋk/	We watch water waves in a **ripple tank**.
slit /slɪt/	Light passes through a narrow **slit**.
double-slit /ˈdʌbl slɪt/	A **double-slit** experiment shows bright and dark lines.
fringe /frɪndʒ/	Each bright **fringe** is a place where the waves add.
polarisation /ˌpəʊləraɪˈzeɪʃn/	**Polarisation** shows that light is a transverse wave.
path difference /pæθ ˈdɪfrəns/	The **path difference** is one wavelength, so the waves add.
fringe spacing /frɪndʒ ˈspeɪsɪŋ/	The **fringe spacing** is the distance between two bright lines.
diffraction grating /dɪˈfrækʃn ˈgreɪtɪŋ/	A **diffraction grating** splits white light into colours.
normal /ˈnɔːml/	The **normal** is a line at 90° to the surface. 90°
slit spacing /slɪt ˈspeɪsɪŋ/	The **slit spacing** is the distance between two slits.
order /ˈɔːdə/	The second-**order** bright line is further from the centre. 2

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