6 · Practical Skills in Physics II

Pearson Edexcel · International A-Level · Physics · Vocabulary in context

Word	Example
damped pendulum	The swing of a **damped pendulum** gets smaller each time.
logarithms /ˈlɒgərɪθəmz/	**Logarithms** turn multiplication into addition.
decay constant (damping)	The **decay constant (damping)** is minus the gradient of ln A against n. ln A n
valid measurement /ˈvælɪd ˈmeʒəmənt/	A **valid measurement** measures what you really want to test.
linearisation /ˌlɪnɪəraɪˈzeɪʃn/	**Linearisation** turns a curve into a straight-line graph.
gradient /ˈgreɪdɪənt/	The **gradient** of a distance-time graph gives the speed. –
log graph /lɒg græf/	A **log graph** of y against x turns a power law into a straight line. y x
best-fit line /best fɪt laɪn/	Draw a **best-fit line** through the points.
extrapolate /ekˈstræpəleɪt/	**Extrapolate** the line back to find the temperature at the start.
intercept /ˌɪntəˈsept/	The line crosses the y-axis at the **intercept**. y
ammeter /ˈæmiːtə/	Connect the **ammeter** in series.
voltmeter /ˈvəʊltmiːtə/	Connect the **voltmeter** across the lamp.
polarity /pəʊˈlærɪti/	The **polarity** of water helps it dissolve salt.

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data logger /ˈdeɪtə ˈlɒgə/	A **data logger** records readings automatically.
parallax /ˈpærəlæks/	Look straight at the scale to avoid **parallax** errors.
resolution /ˌrezəˈluːʃn/	High **resolution** shows small details.
precision /prɪˈsɪʒn/	Readings with high **precision** are all very close to each other.
timing marker /ˈtaɪmɪŋ ˈmɑːkə/	Use a **timing marker** at the centre of the swing.
orientation /ˌɔːrɪənˈteɪʃn/	Measure the wire in a different **orientation** each time.
random variation /ˈrændəm ˌveərɪˈeɪʃn/	An unexpected storm can cause **random variation** in sales.
zero error /ˈzɪərəʊ ˈerə/	The meter shows 0.2 V with nothing connected: a **zero error**. 0.2 V
systematic error /ˌsɪstəˈmætɪk ˈerə/	A scale that reads too high gives a **systematic error**.
micrometer /maɪˈkrɒmɪtə/	Use a **micrometer** to measure the thickness of a coin.
percentage uncertainty /pəˈsentɪdʒ ʌnˈsɜːtənti/	0.1 cm out of 25.0 cm is a **percentage uncertainty** of 0.4%. 0.1 cm 25.0 cm 0.4%
significant figures /sɪgˈnɪfɪkənt ˈfɪgəz/	The number 0.0450 has three **significant figures**. 0.0450
compounded uncertainties /kɒmˈpaʊndɪd ʌnˈsɜːtəntiz/	**Compounded uncertainties** are found by adding the percentage uncertainties.

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Word	Example
↑↓ **range** /reɪndʒ/	The **range** of the results is from 4.1 g to 4.5 g. 4.1 g 4.5 g
— **mean** /miːn/	Add the three readings and divide by three to find the **mean**.
± **absolute uncertainty** /ˈæbsəluːt ʌnˈsɜːtənti/	The **absolute uncertainty** in 25.0 ± 0.1 cm is 0.1 cm. 25.0 ± 0.1 cm 0.1 cm
△ **large triangle** /lɑːdʒ ˈtraɪæŋgl/	Draw a **large triangle** to find the gradient.
🔒 **control variables** /kənˈtrəʊl ˈveərɪəblz/	Keep the **control variables**, such as the temperature, the same.

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