Work, energy and power

A-Level Physics · Vocabulary in context

Word	Example
work /wɜːk/	You do **work** when you push a box across the floor.
energy /ˈenədʒi/	Food gives your body the **energy** it needs to move.
power /ˈpaʊə/	A 60 W lamp has a **power** of 60 watts. 60 W 60
kinetic energy /kɪˈnetɪk ˈenədʒi/	A fast car has a lot of **kinetic energy**.
electrical /ɪˈlektrɪkl/	A kettle is an **electrical** device.
electrical energy /ɪˈlektrɪkl ˈenədʒi/	A battery gives **electrical energy** to the lamp.
displacement /dɪˈspleɪsmənt/	After walking 3 km east, your **displacement** is 3 km east. 3 km 3 km
component /kəmˈpəʊnənt/	Find the vertical **component** of the ball's velocity.
horizontal /ˌhɒrɪˈzɒntl/	The floor is **horizontal**.
• **scalar** /ˈskeɪlə/	Mass is a **scalar** because it has no direction.
normal contact force /ˈnɔːml ˈkɒntækt fɔːs/	The table pushes up on the book with a **normal contact force**.
friction /ˈfrɪkʃn/	**Friction** between the tyres and the road stops the car sliding.
velocity /vəˈlɒsɪti/	The ball's **velocity** is 5 m/s to the left. 5 m/s

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frictionless /ˈfrɪkʃənləs/	On a **frictionless** surface, the block keeps sliding.
mass /mæs/	The **mass** of this bag of rice is 5 kg. 5 kg
weight /weɪt/	Your **weight** is the pull of the Earth on you.
gravitational potential energy /ˌgrævɪˈteɪʃənl pəˈtenʃl ˈenədʒi/	A book on a high shelf has more **gravitational potential energy**.
conservation of energy /ˌkɒnsəˈveɪʃn ɒv ˈenədʒi/	**Conservation of energy** means energy is never made or destroyed.
closed system /kləʊzd ˈsɪstəm/	In a **closed system**, no energy goes in or out.
elastic potential energy /ɪˈlæstɪk pəˈtenʃl ˈenədʒi/	A stretched spring stores **elastic potential energy**.
chemical energy /ˈkemɪkl ˈenədʒi/	Food and fuel store **chemical energy**.
ramp /ræmp/	The trolley rolls down a **ramp**.
thermal energy /ˈθɜːml ˈenədʒi/	Rubbing your hands turns work into **thermal energy**.
spring /sprɪŋ/	The **spring** stretches when you hang a mass on it.
compression /kəmˈpreʃn/	The **compression** of the spring is 3 cm. 3 cm
efficiency /ɪˈfɪʃənsi/	A lamp with 20% **efficiency** turns only a fifth of its energy into light. 20%
voltage /ˈvəʊltɪdʒ/	The battery has a **voltage** of 1.5 V. 1.5 V
current /ˈkʌrənt/	The **current** in the lamp is 0.5 A. 0.5 A

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Word	Example
tension /ˈtenʃn/	The **tension** in the rope holds up the lamp.
drag /dræg/	**Drag** slows down a boat in the water.
momentum /məʊˈmentəm/	A heavy truck has a lot of **momentum**.
spring constant /sprɪŋ ˈkɒnstənt/	A stiff spring has a large **spring constant**.
projectile /prəˈdʒektaɪl/	A thrown ball is a **projectile**.
bungee jumper /ˈbʌndʒiː ˈdʒʌmpə/	A **bungee jumper** falls until the rope stretches.

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