Work, Energy, and Power

AP Physics C: Mechanics · Vocabulary in context

Word	Example
Kinetic energy /kɪˈnetɪk ˈenədʒi/	A faster car has more **kinetic energy**.
scalar /ˈskeɪlə/	Mass is a **scalar** because it has no direction.
joules /dʒuːlz/	A 3 W lamp uses 360 **joules** in two minutes. 3 W 360
reference frame /ˈrefrəns freɪm/	A train is a **reference frame** for the people inside it.
Work /wɜːk/	**Work** is force times distance.
integral /ˈɪntɪgrəl/	Use an **integral** to find the charge in a pulse.
work–energy theorem /wɜːk ˈenədʒi ˈθɪərəm/	The **work–energy theorem** says work changes kinetic energy.
friction /ˈfrɪkʃn/	**Friction** between the tyres and the road stops the car sliding.
normal force /ˈnɔːml fɔːs/	The **normal force** acts perpendicular to the contact surface.
Potential energy /pəˈtenʃl ˈenədʒi/	**Potential energy** is stored energy.
conservative forces /kənˈsɜːvətɪv ˈfɔːsɪz/	Gravity and spring forces are **conservative forces**.
escape speed	The Earth's **escape speed** is 11 km/s. 11 km/s
derivative /dɪˈrɪvətɪv/	Use the **derivative** to find the curve's slope at this point.

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stable equilibrium /ˈsteɪbl ˌiːkwɪˈlɪbrɪəm/	A ball at the bottom of a bowl is in **stable equilibrium**.
unstable equilibrium /ʌnˈsteɪbl ˌiːkwɪˈlɪbrɪəm/	A pencil standing on its tip is in **unstable equilibrium**.
Mechanical energy /mɪˈkænɪkl ˈenədʒi/	Without friction, a swing keeps the same **mechanical energy**.
nonconservative forces /ˌnɒŋkənˈsɜːvətɪv ˈfɔːsɪz/	Friction and air drag are **nonconservative forces**.
thermal energy /ˈθɜːml ˈenədʒi/	Rubbing your hands turns work into **thermal energy**.
turning points /ˈtɜːnɪŋ pɔɪnts/	A mass on a spring stops for a moment at its **turning points**.
Power /ˈpaʊə/	**Power** is energy per second.
watts /wɒts/	The lamp uses three **watts** of power.

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