Motion in a circle

A-Level Physics · Vocabulary in context

Word	Example
radian /ˈreɪdɪən/	One full turn is an angle of 2π **radians**. 2π
velocity /vəˈlɒsɪti/	The ball's **velocity** is 5 m/s to the left. 5 m/s
acceleration /əkˌseləˈreɪʃn/	The car speeds up quickly, so its **acceleration** is large.
arc /ɑːk/	The **arc** is part of the edge of a circle.
angular speed /ˈæŋgjʊlə spiːd/	The wheel turns with an **angular speed** of 2 radians per second. 2
angular displacement /ˈæŋgjʊlə dɪˈspleɪsmənt/	After a quarter turn, the **angular displacement** is 90°. 90°
period /ˈpɪərɪəd/	The **period** of the wave is 0.02 s. 0.02 s
frequency /ˈfriːkwənsi/	A **frequency** of 50 Hz means 50 waves every second. 50 Hz 50
revolution /ˌrevəˈluːʃn/	The wheel makes one **revolution** every second.
circumference /sɜːˈkʌmfrəns/	The **circumference** of the wheel is 2 m. 2 m
tangential /tænˈdʒenʃl/	The stone flies off in a **tangential** direction.
centripetal acceleration /senˈtrɪpɪtl əkˌseləˈreɪʃn/	A car turning a corner has a **centripetal acceleration**.
perpendicular /ˌpɜːpənˈdɪkjʊlə/	The wall is **perpendicular** to the floor.
force /fɔːs/	You use a **force** to push a door open.

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centripetal force /sen'trɪpɪtl fɔːs/	The string gives the **centripetal force** to the spinning ball.
latitude /'lætɪtjuːd/	Beijing has a **latitude** of 40° north.
weight /weɪt/	Your **weight** is the pull of the Earth on you.
tension /'tenʃn/	The **tension** in the rope holds up the lamp.
friction /'frɪkʃn/	**Friction** between the tyres and the road stops the car sliding.
normal contact force /'nɔːml 'kɒntækt fɔːs/	The table pushes up on the book with a **normal contact force**.
Banked corner /bæŋkt 'kɔːnə/	A **Banked corner** helps cars turn at speed.
banked /bæŋkt/	The race track is **banked** at the corners.
satellite /'sætəlaɪt/	The **satellite** goes round the Earth.
orbit /'ɔːbɪt/	The Moon's **orbit** takes about 27 days.
gravitational attraction /ˌgrævɪ'teɪʃənl ə'trækʃn/	**Gravitational attraction** keeps the Moon near the Earth.
electron /ɪ'lektrɒn/	An **electron** has a negative charge.
electrostatic /ɪˌlektrəʊ'stætɪk/	Two charged balls push apart with an **electrostatic** force.
nucleus /'njuːklɪəs/	The **nucleus** is at the centre of an atom.

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conical pendulum /ˈkɒnɪkl ˈpendjʊləm/	A ball on a string swinging in a circle is a **conical pendulum**.
magnetic field /mægˈnetɪk fiːld/	A magnet has a **magnetic field** around it.
radial /ˈreɪdɪəl/	The field lines are **radial**: they point straight out from the centre.

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