

Knowledge Organiser: Forces

Enquiry Skills and Concepts

- Plan different types of enquiry to answer questions
- Recognise and control variables as necessary
- Choose and use a range of scientific equipment with increasing accuracy and precision
- Collect data and make decisions about what observations to make, what measurements to use and how long to make them for
- Choose how to record data and results including tables and graphs
- Present findings in oral and written forms
- Make predictions and gather evidence (fair testing) to prove or disprove the predictions
- Identify when further tests and observations may be needed

Knowledge and understanding

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.



Key Vocabulary

conclusion - a summary of how results support or contradict the original prediction.

force - a push, pull, twist or turn.

forcemeter - a device used to measure forces (sometimes called a Newtonmeter).

friction - the force between two moving surfaces.

gravity - the force that causes all objects to fall to the ground.

mass - the amount of material in an object measured in grams (g)

balanced - when the forces acting on an object are opposite and equal such that the object does not move.

unbalanced - when one force acting on an object is greater than the other forces, the object moves in the direction in which direction that force is acting.

Newtons - the units used to measure forces