Linked learning theme: Victorian Scarborough

Autumn Term 2 Year 5

Science – Levers, Pulleys and Gears

Prior Knowledge

In Year 3, children learnt about simple forces and magnetism.

Core knowledge

- Some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
- Forces (pushes or pulls) arise from the interaction between two objects.
- Forces can deform objects; stretching and squashing-springs; with rubbing and friction between surfaces.
- Forces are measured in Newtons

Key skills

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- use Force meters to measure forces
- use test results to make predictions to set up further comparative and fair tests.
- report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identify scientific evidence that has been used to support or refute ideas or argument

Vocabulary

Lever pulley
gear
mechanism
friction Newton
resistance

Learning outcomes

- **I** can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.
- I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
- I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

- I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- I can use test results to make predictions to set up further comparative and fair tests**.**