Year 5 - Forces (Physics)

Working Scientifically Focus: Setting up tests and enquiries and recording data

Prior learning

Year 5

Knowledge Forces

Compare how things move on different surfaces.

Notice that some forces need contact between two objects, but magnetic forces can act at a distance.

Observe how magnets attract or repel each other and attract some materials and not others.

Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.

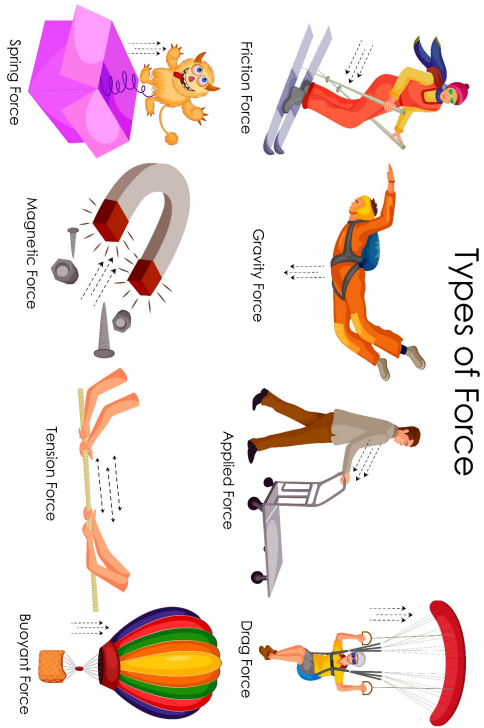
Describe magnets as having two poles.

Predict whether two magnets will attract or repel each other, depending on which poles are facing.

In this topic, we are learning to

Knowledge

- 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

Force	A force that acts between two surfaces or objects that are moving, or trying to move, across each other
Gravity	A pulling force exerted by the Earth (or anything else which has mass).
Air Resistance	A type of friction caused by air pushing against any moving object.
Water Resistance	A type of friction caused by water pushing against any moving object
Friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.

Questions you will know the answers to...

What is a force?
When does friction occur?
What is air resistance?
What is water resistance?

Working Scientifically Assessment Focus

SETTING UP TESTS AND ENQUIRIES

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Select from a range of practical resources to gather evidence to answer their questions. Carry out fair tests, recognising and controlling variables.
- Decide what observations or measurements to make over time and for how long. They look for patterns and relationships using a suitable sample.

RECORDING DATA

- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Decide how to record and present evidence. Record observations e.g., using annotated photographs, videos, labelled diagrams, observational drawings, labelled scientific diagrams or writing.
- Record measurements e.g., using tables, tally charts, bar charts and line graphs.
- Record classifications e.g., using tables, Venn diagrams, Carroll diagrams and classification keys. Present the same data in different ways to help with answering the question.