



Forces and Magnets



Year 3
Autumn Term

Key Learning

Some forces need contact between two objects, but magnetic forces can act at a distance. Magnets pull objects towards them but the surface and object is pulled across can change how it behaves.

Magnets can attract or repel each other. Objects containing iron, nickel or cobalt are magnetic. Not all objects (or types of metals) are magnetic.

Magnetic fields are invisible.

Like poles repel. For example, North and North poles repel. South and South Poles repel.

Opposite poles attract. For example, North and South Poles attract.

Magnets are made up of tiny magnetic particles which have all lined up in the same direction, producing a noticeable magnetic effect (field). Magnets always contain two poles (north and south) and if a magnet is broken in two, each piece will still have two poles.

The properties of magnetic attraction and repulsion can make useful machines. 5 different machines that use magnets are: a maglev train, an MRI machine, a crane, a button magnet, and a compass.

Different magnets have different magnetic strengths.

Working Scientifically

- Set up simple enquiries, ask relevant questions and make predictions.
- Make careful and systematic observations.
- Gather, record and classify findings to draw simple conclusions.



Key Vocabulary

forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving or trying to move across each other.
surface	The top layer of something.
magnet	An object which produces a magnetic force that pulls certain objects towards it.
magnetic	Objects attracted to magnets, are magnetic.
magnetic field	The area around a magnet where it will pull magnetic objects towards it.
poles	North and south poles are found at either end of a magnet.
repel	When the same poles are pointing toward each other, they will repel.
attract	When opposite forces are pointing towards each other, they will attract.

