

What role do forces and magnets play in everyday life?

What I should already know from EYFS/KS1:

- Have an awareness of starting and stopping the movement of objects with pushes and pulls.
- Know that some objects float and some sink.
- Describe the physical properties of materials, including metal.

New learning (scientific knowledge):

- Forces can be pushes or pulls.
- Forces change the motion of an object.
- Friction is a force that acts between two surfaces or objects that are moving (or trying to move) across each other.
- Magnets exert attractive and repulsive forces on each other.
- Like poles repel. Opposite poles attract.
- A magnetic field is invisible.

Enquiry questions:

- How do objects move?
- What is gravity?
- Who was Sir Isaac Newton?
- How does magnetic force act on objects?
- Which items are attracted to magnets?
- How do magnets behave?

New learning (scientific skills):

- Investigate how a change in the amount of force affects an object's movement.
- 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.
- 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.

Vocabulary:

attract	Attraction is a force that pulls objects together.
compass	A tool which uses magnetism to find directions.
forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
magnet	An object that produces a magnetic force that pulls certain objects towards it.
magnetic	Objects which are attracted to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic.
magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet.
poles	North and south poles are found at different ends of a magnet.
surface	The top layer of something.
repel	Repulsion is a force that pushes objects away.

