

Key facts:

Different surfaces create different types of friction. The amount of friction created by an object moving over a surface depends on the roughness of the surface and the force between them.

Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.

A magnetic field is invisible.

The needle in a compass is a magnet.

Like poles repel and opposite poles attract.

Magnetic objects contain iron, nickel or cobalt. However, not all metals are magnetic.

Important questions:

What are Newton's Three Laws of Motion?

What different types of magnets are there?

How do magnetic poles work?

When have you experienced forces in action?

How do different surfaces affect the motion of an object?

Key skills for you to practice:

Set up a fair test taking accurate measurements and drawing a bar graph based on results and record these findings using scientific language.

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

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

Hopton Primary School

Knowledge Organiser for KS2 Year 3/4 Topic: Forces and Magnets

What do we need to learn?

To know that some forces need contact between two objects.

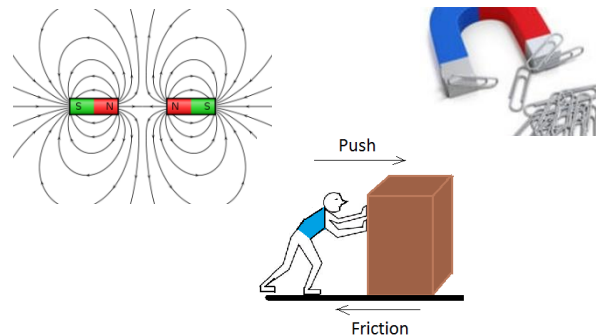
To compare how things move on different surfaces.

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

To understand that magnets attract some materials and not others.

To know that magnets that two poles and can repel and attract.

Key Images to discuss



What I should already know:

KS1	Materials work in Year 2 (solid, liquid, gas).
-----	--

Links to Future Learning:

KS2	Children will explore forces and magnets in more depth in year 5 considering gravity/air resistance, for example.
-----	---

Key Vocabulary:

Word	What does it mean?
Repel	To push away (the opposite of attract).
Attract	To pull towards (opposite of repel).
Poles	2 sides of a magnet where the magnetism is strongest.
Magnets	A material or object that produces a magnetic field, it attracts or repels magnetic objects.
Magnetism	The force of attraction and repelling caused by a magnet.
Friction	The force between two moving surfaces.
Gravity	A pushing force exerted by the Earth, it attracts objects towards the centre of the Earth.
Force	A push, pull, twist or turn.