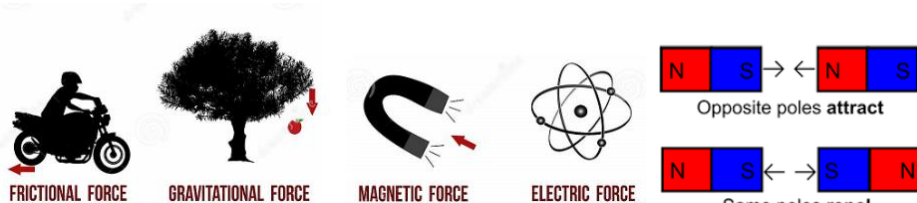


Y4/5 Subject: Forces and Magnets



Why are we learning about...topic...?

We are **building on** all our previous learning about materials in KS1: names, properties, and uses of everyday materials.

This **new learning is important because** it will help us to understand how and why things move or stay still in our everyday lives. As magnets are present in most of our electronic devices, this learning helps us to develop our understanding of how things we rely on work and develop an appreciation for, and curiosity about, the roles of physics in explaining the world around us.

This will help us get ready for **future learning** about water resistance and mechanisms including pulleys, levers and gears. It will also be relevant in a wide range of jobs in the areas of science and engineering.

Important questions to answer:

- Which materials are magnetic?
- What do the letters N and S stand for on a magnet?
- Why do magnets attract or repel?
- How do different surfaces affect the movement of an object?
- Why do objects fall towards the Earth?
- Which forces act on an object when it moves?

Experiences we will have:

- Toy car investigation
- Create a magnetic compass

Things we need to know:

- To know that magnets attract some metals and not others
- To know that magnets have two poles: North and South
- To know that opposite poles of magnets are attracted to each other, and same poles repel each other
- To know that the friction between two surfaces will affect how things move
- To know that gravity is the force that pulls objects towards the Earth
- To know that air resistance will affect the movement of objects.

Skills we need to learn:

- I can predict which materials we think will be magnetic
- I can apply my understanding of attraction and repulsion
- I can investigate how different surfaces affect the movement of an object.
- I can explain how a compass works
- I can compare the effect of air resistance on different objects
- I can identify the forces of friction, gravity, pushes and pulls.

Subject Specific Vocabulary:

Attract	Magnet(ism)	Push
Compass	Magnetic field	Repel
Force	Metal	Resistance
Friction	North pole	South pole
Gravity	Pull	Surface

