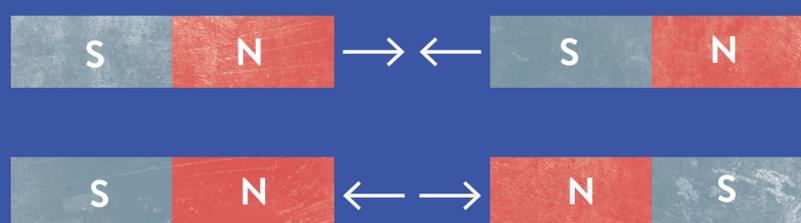


MATERIALS

Core Learning of this unit

- Magnetism is a **non-contact force**: it does not need to be physically touching another object to have an effect.
- A **magnet** is an object that produces a **force** that pulls on only a few other metals: iron, nickel and cobalt.
- The **magnetic field** is the area around the magnet in which magnetism is felt.
- The most common forms of magnet are bar magnets, horseshoe magnets.
- The magnetic force is strongest at the ends of a magnet, which are called **poles**.
- **Like poles repel: unlike poles attract.**
- Some uses of magnets in everyday life include: fridge doors, storing data on computers, Maglev trains, medical equipment (Magnetic Resonance Imaging)
- The Earth's magnetic field is caused by the molten metal in the Earth's core.



Prior Learning & Curriculum links



Prior learning

- From KS 1: Children will know a variety of materials including magnets.

Curriculum Links

- Geography: Research how the Earth's magnetic poles have moved in comparison with the geographical poles over the past 100 years.
- DT: Making magnets out of metals.

Working Scientifically



- Plan and carry out an **investigation** to measure the force of a magnet using a force meter.
- Plan, set up and carry out comparative and fair tests, and collect accurate results to explore the properties of magnets.
- Use the results of comparative and fair tests to explain some properties of magnets.
- **Investigate** how materials (such as iron, cobalt and nickel) can be change into magnets.

Vocabulary



- **Force**: a push, pull, twist or turn caused when two objects interact with each other.
- **Magnet**: an object or device that attracts iron or another magnetic material.
- **Contact**: touching.
- **Non-contact**: not touching.
- **Attract**: pull towards.
- **Repel**: push away.
- **Magnetic**: attracted to a magnet.
- **Non-magnetic**: not attracted to a magnet.
- **Iron**: a metal that can be made into a magnet.
- **Pole**: the area of a magnet where the magnetic force is strongest.
- **Magnetic North**: the direction of the Earth's magnetic North pole.



Significant People

Archimedes, the famous scientist from ancient Greece, is supposed to have pulled the nails out of enemy ships by using lodestone (magnetite). The ships then came apart, causing them to sink.