Autumn 2 – Natural Elements

Science – Forces and Magnets

Key Vocabulary

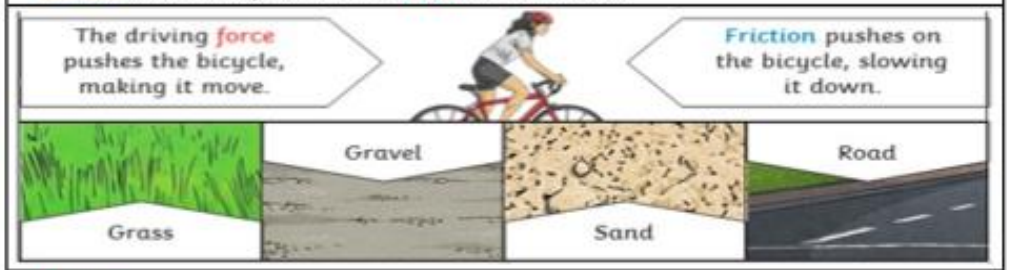
forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
surface	The top layer of something.
magnet	An object which produces a magnetic force that pulls certain objects towards it.
magnetic	Objects which are attracted to 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.
repel	Repulsion is a force that pushes objects away. For example, when a north pole is placed near the north pole of another magnet, the two poles repel (push away from each other).
attract	Attraction is a force that pulls objects together. For example, when a north pole is placed near the south pole of another magnet, the two poles attract (pull together).

Working Scientifically Skills

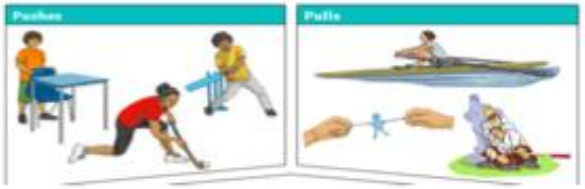
- **Compare** how different things move and group them.
- **Raise questions** and **carry out tests** to find out how far things move on different surfaces.
- **Gather and record data** to find answers to their questions.
- **Explore** the strengths of different magnets and **find a fair way to compare them.**
- **Sort materials** into those that are magnetic and those that are not.
- **Look for patterns** in the way that magnets behave in relation to each other and what might affect this e.g. how strong is the magnet or which pole faces another.
- **Identify** how these properties make magnets useful in everyday items and suggest creative uses for different magnets.

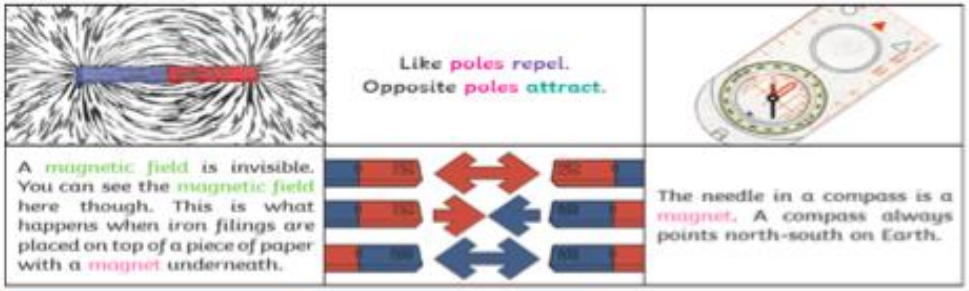
Key Knowledge

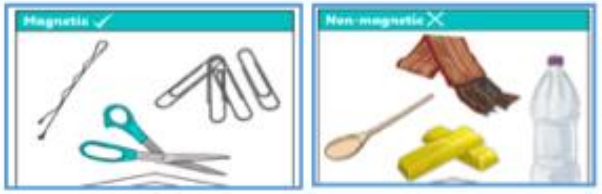
Different surfaces create different amounts of friction. The amount of friction created by an object moving over a surface depends on the roughness of the surface and the object, and the force between them.



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







Not all metals are magnetic. Objects that contain iron, nickel and cobalt are magnetic.