



Science Topic: Forces and Magnets

Year: 3 **Term:** Summer 1

Key Knowledge/Content:

- Magnets exert attractive and repulsive forces on each other.
- Magnets exert non-contact forces, which work through some materials.
- Magnets exert attractive forces on some materials.
- Magnet forces are affected by magnet strength, object mass, distance from object and object material.

Scientist Focus:

William Gilbert (Physicist)

Theorised that the Earth was like a magnet, with the core containing iron and compasses pointing North.

Links to:

Prior learning:

Know how pulling and pushing can change the shape of a material.

Future learning:

Identify different forces around such as gravity, air resistance and friction.

Key vocabulary with definition:

Prior vocabulary:

- Push
- Pull

New vocabulary:

- Magnet- A piece that metal that pulls or pushes metal.
- Attract- Pulled together.
- Repel- Pushed apart.
- Poles- The two ends of a magnet, being North and South.
- Force- An action that changes the motion of an object or body.
- Surface- Something that supports the weight of an object.
- Compass- A device that uses magnets to show direction e.g. North or South.
- North
- South

By the end of this unit

All children can: **know** some materials that are magnetic and **understand** what is meant by “attract” and “repel”.

Most children can: **make predictions** about if materials will attract or repel and **investigate** whether distance affects the level of magnetism.

Some children can: **explain** how to change the level of magnetism and **investigate** how surfaces can affect magnetism.

Background understanding for teachers and parents:

This unit will use the ideas of “push” and “pull” to investigate magnetism of materials. They will investigate how size, distance and material can affect magnetism, making predictions and drawing conclusions.

Curriculum Driver (one):

Knowledge of the World

Evidence outcome:

Understand that compasses can point to direction including North and South, relating to the poles of the Earth.