Shillbottle Primary
Fun, Respect & Friendship

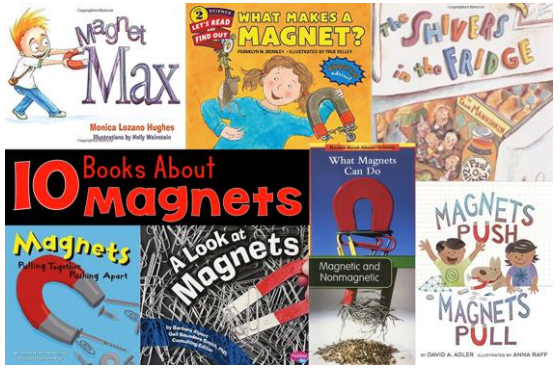
Science - Year 3 - autumn 2 - Forces and Magnets

Vocabulary	Meaning
acceleration	An increase in the rate or speed of something.
attract	To pull towards. Opposite of repel.
balanced force	Two forces of equal size acting in opposite directions.
contact force	A force that requires physical contact to occur e.g. kicking a ball.
force	A push or pull on an object which can cause it to move, change speed, direction or shape. Measured in Newtons (N).
friction	The resistance of motion when one object rubs against another.
gravity	The area around a large object when a weight can be felt.
mass	The amount of matter contained in an object. Measured in units such as g, kg.
magnet	A material or object that produces a magnetic field. It attracts or repels magnetic objects, including iron.
propel	The act of driving or pushing forward.
repel	To push away. Opposite of attract.
weight	The force due to gravity on objects.

Skills

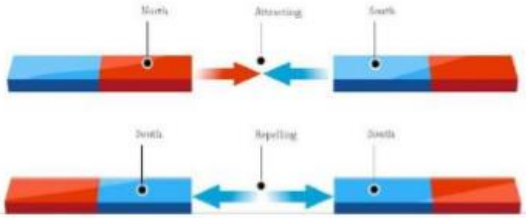
- Identify forces as pushes and pulls.
- Identify that friction is a force that slows objects down.
- I can sort and classify materials.
- I can investigate and explore outcomes.
- Talk about your learning.

Books



Knowledge

Magnets have north and south poles. These attract each other but two north or two south poles repel each other.



Force

★ An object has a **mass**, which is the total amount of material it is made of. Mass is **not a force** and is measured in kilograms.

★ We measure **forces** in **newtons** using a force meter (also called a newton meter).

★ The word newton comes from Sir Isaac Newton who was the first person to put together some ideas about forces.

What I should be able to do and know now.

Knowledge

•I know that some forces need contact between two objects.

•I know that objects move at different speeds.

•I know how non-fiction books can help my learning.

Skills

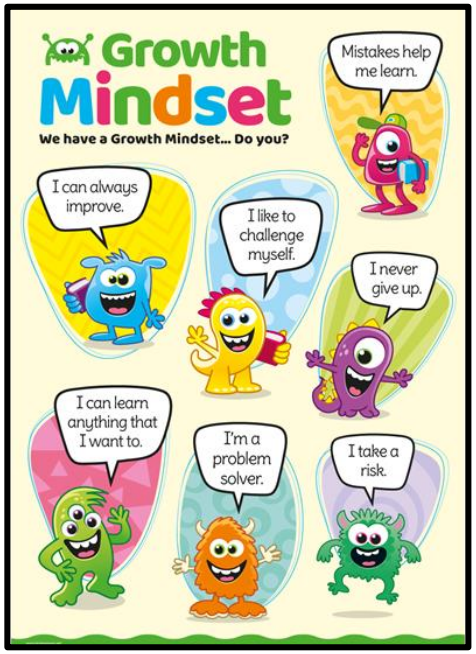
•Identify that there are different types of forces acting on objects.

•I am able to compare how objects move on different surfaces.

•I can compare, sort and group materials.

•I can use a magnet to identify whether the action is pull or push.

Growth Mindset Strategies



What I will be learning

•How to describe magnets as having two poles.

•How to identify different types of magnets.

•How to identify whether a force is a repelling or an attracting force.

•The differences between magnetic and non-magnetic materials.

•How to create an investigation and display my results.

What I will know and be able to do at the end of the topic.

Knowledge

Identify the type of force required to carry out an action.

Explain that magnets produce an invisible pulling force.

Can you name 3 magnetic materials?

What are the different types of magnet?

I know that magnets will r_____ or a_____ based on their poles.

Skills

What type of chart can I use to display my results?

I can explain my predictions and conclusions using key words or prompts.

Investigate the force of friction produced by different surfaces.

Investigate the strength of different magnets.