TPS Science Knowledge Organiser — Year 3 — Forces and Magnets — Spring term

Be a physistist

force	A force is a push or a pull. Forces can make things start moving, stop moving or change their shape.
push	When you **push** something you are using **force** to move it away from you.
pull	When you **pull** something you are using **force** to move it towards you.
twist	**Push** and **pull** something at the same time.
contact force	A **force** produced by touch.
non-contact force	A **force** that is produced at a distance.
magnetic force	A magnet attracts some types of **metal** and other magnets towards it. Magnetism is a **non - contact force.**
strength	How powerful the force is.
magnetic material	A material that is attracted to a magnet. It can never be repelled by a magnet.

bar magnet 	**button magnet** 
ring magnet 	**horseshoe magnet** 

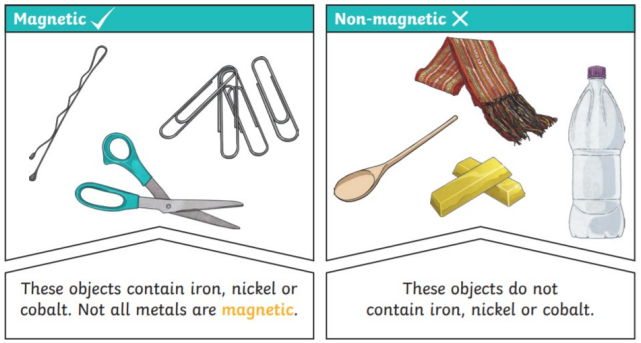
A force is a push or a pull.

When an object moves on a surface, the texture of the surface and the object affect how it moves. It may help the object to move better or it may hinder its movement
e.g. ice skater compared to walking on ice in normal shoes.

For some forces to act, there must be contact
e.g. a hand opening a door, the wind pushing the trees.

Some forces can act at a distance
e.g. magnetism. The magnet does not need to touch the object that it attracts.

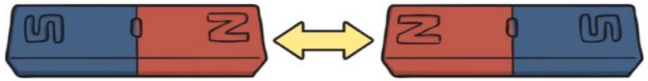
A magnet attracts magnetic material. **Iron** and **nickel** and other materials containing these, e.g. stainless steel, are magnetic.



The strongest parts of a magnet are the poles. Magnets have two **poles** – a **north pole** and a **south pole.**

south pole  north pole

If two like poles, e.g. two north poles, are brought together they will push away from each other – **repel.**



If two unlike poles, e.g. a north and south, are brought together they will pull together – **attract.**