

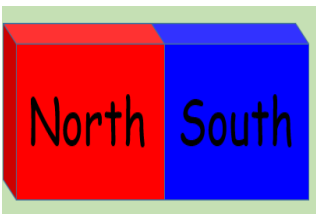
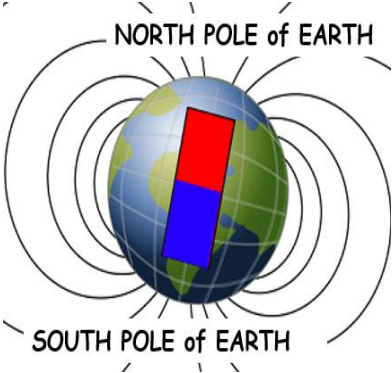
Knowledge Organiser		
Year: 3	Term: Summer 1	Topic: Forces and Magnetism

Key knowledge

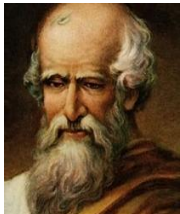
- A force is a push or a pull.
- Some forces work by touch or contact between 2 objects.
- Some forces work without touching – they can act over a distance, for example, a ball of scrunched up paper can be moved without anyone touching it - it might be blown.
- All objects are moved using pushes, pulls or twists.
- Friction is a force **between two surfaces** that are sliding, or trying to slide, across each other. For example, when you try to push a book along the floor, friction makes this difficult.
- Friction always works in the direction **opposite** to the direction in which the object is moving or trying to move. Friction always **slows** a moving object down.
- Magnetism is a distance force that draws magnetic objects towards magnets.
- Some objects are magnetic, and some are not.
- There are many different types of magnets.
- Only metal things stick to magnets.
- Not all metals are magnetic – only iron, nickel and cobalt stick to magnets.
- All magnets have an invisible line of force. surrounding them called a **MAGNETIC FIELD**.
- The magnetic field is the strongest at the ends of the magnet. These are called the magnetic **POLES**.
- Magnets have a north and south pole.



There are many different types and strengths of magnets.



Archimedes was a Greek scientist known for his work on floating and sinking.



The Earth has a magnetic iron core, which creates a giant bar magnet inside our planet. This gives us the North and South poles.

Learning Objectives			
Lesson 1	I can explain what a force is and notice that some forces need contact between two objects, but magnetic forces can act at a distance.		
Lesson 2	I can explain what friction is and compare how things move on different surfaces.		
Lesson 3	I can explain how magnets attract some materials and not others.		
Lesson 4	I can describe magnets as having two poles and I can say whether two magnets will attract or repel each other, depending on which poles are facing.		
Lesson 5	I notice that some forces need contact between two objects, but some forces can act at a distance.		
Lesson 6	I can show what I have learnt.		