Holy Family Catholic Primary School Cronton

Year 3: Science autumn term 1 | **Unit:** The power of forces | **Theme:** Forces and magnets

What I should already know:

I know that the shape of some materials can be changed when they are stretched, twisted, bent and squashed.
I Know how different toys move.
I know what a force is and I can explain that a push and pull are types of forces.

Fact file

Different surfaces affect the motion of an object?
Forces act in opposite directions to each other.
When an object moves across a surface, friction acts as an opposite force.
Friction is a force that holds back the motion of an object.
Some surfaces create more friction than others which means that objects move across them slower.

On a ramp, the force that causes the object to move downwards is gravity.
Objects move differently depending on the surface of the object itself and the surface of the ramp.

What I will know by the end of the unit:

I can compare how things move on different surfaces.
I notice that some forces need contact between two objects, but magnetic forces can act at a distance.
I can observe how magnets attract or repel each other and attract some materials and not others.
I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
I can describe magnets as having two poles.
I can predict whether two magnets will attract or repel each other, depending on which poles are facing.

Key Scientist

Mary Somerville (1780-1872) was fascinated by magnets and carried out lots of experiments with them. She was also one of the first popular Science writers - selling many books in her lifetime. She was the first woman to be elected to the Royal Astronomical Society.

Vocabulary

Attract	If one object attracts another object, it causes the second object to move towards it.
Forces	The pulling or pushing effect that something has on something else.
Friction	The resistance of motion when there is contact between two surfaces.
Magnet	A piece of iron or other material which attracts magnetic materials towards it.
Magnetic field	An area around a magnet, or something functioning as a magnet, in which the magnet's power to attract things is felt.
Poles	The North and South ends on a magnet.
Pull	When you pull something, you hold it firmly and use force in order to move it towards you or away from its previous position.
Push	When you push something, you use force to make it move away from you or away from its previous position.
Repel	If one object repels another object, it causes the second object to move away from it.
Surface	The flat top part of something or the outside of it.

Magnetic poles