



Pinner Wood School



Year Group	3	Term	Autumn 2	Subject	Science	Topic	Forces and Magnets
						Key Question	KQ: What impact do forces have on different objects?
Prior Learning and other Curriculum Links	<p>Year 1:</p> <ul style="list-style-type: none"> • Distinguish between an object and the material from which it is made <p>Year 2:</p> <ul style="list-style-type: none"> • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses 					Skills Statements	<ul style="list-style-type: none"> • I can compare how things move on different surfaces. • I can see 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 some 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.
Fundamentals	<ul style="list-style-type: none"> • Compare how things move on different surfaces. • Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. • Observe how magnets attract or repel each other and attract some materials and not others. • Describe magnets as having 2 poles. • Predict whether 2 magnets will attract or repel each other, depending on which poles are facing. • Compare how things move on different surfaces • Observe how magnets attract or repel each other and attract some materials and not others 					Key Facts/Sticky Knowledge	<ul style="list-style-type: none"> • A force is a push or pull. Forces can make things move, change their speed, or change their shape. • When forces are balanced, there is no change in motion. When the motion of an object changes, the forces are unbalanced. • Air is a pushing force, one that can be very powerful - the stronger the wind, the stronger the PUSH. • 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.

	<ul style="list-style-type: none"> Describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing. 		<ul style="list-style-type: none"> A material is magnetic (ferromagnetic) if it is attracted to a magnet. If a material is not attracted to the magnet it is non-magnetic. Magnets can be used to move objects Magnets attract another material if there is a pulling force between the objects whereas a magnet repels if there is a pushing force
Our Curriculum Journey	<p>Journey: The children start this topic by understanding what a force is. They will also explore the difference between balanced and unbalanced forces are, observing them in action. Next, the children will look at how air makes things move, and that the stronger the wind, the harder the push is. Moving on from this, the children will understand why objects will move differently on different surfaces. They will explore this using different materials. The next lesson will look at how they know an object is magnetic. Here they will understand the difference between attract and repel. After this, the focus of the lesson will be on how strong magnets can be and how we are able to use magnets to move objects. Finally, the children will be looking at how magnetism changes depending on the magnet, in the form of an experiment and write up.</p>		
Key Vocabulary (revisited)	wood, metal, plastic, glass, brick, rock, paper, prediction, results, conclusion	Key Vocabulary (new)	push, pull, twist, force, air, turns, fast, slow, slows down, material, surface, magnet, attracts, magnetic material, magnetism, acts at a distance, non-magnetic material, metal, non-metal, strength, north pole, south pole, repel