

Goonhavern Primary School- Science

TOPIC: Forces and Magnets

YEAR: 3

STRAND: Physics

What should I know already?	What will I know by the end of the unit?	
<ul style="list-style-type: none"> ● The shape of some materials can be changed when they are stretched, twisted, bent and squashed. ● Know how different toys move. ● Know what a force is and be able to explain that a push and pull are types of forces. ● That when forces are applied to an object they allow them to move or stop moving. ● The strength of the force determines how far and fast an object moves. 	<p>What are forces?</p>	<ul style="list-style-type: none"> ● Forces are pushes and pulls. ● These forces change the motion of an object. ● They will make it start to move or speed up, slow it down or even make it stop. ● For example, when a cyclist pushes down on the pedals of a bike, it begins to move. The harder the cyclist pedals, the faster the bike moves. ● When the cyclist pulls the brakes, the bike slows down and eventually stops.
	<p>How do different surfaces affect the motion of an object?</p>	<ul style="list-style-type: none"> ● 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.
	<p>How do magnets work?</p>	<ul style="list-style-type: none"> ● Magnets produce an area of force around them called a magnetic

		<p>field.</p> <ul style="list-style-type: none"> • When objects enter this magnetic field, they will be attracted to or repelled from the magnet if they are magnetic. • When magnets repel, they push each other away • When magnets attract, they pull together.
	Which materials are magnetic?	<ul style="list-style-type: none"> • Objects that are magnetic, are attracted to magnets. • Iron and steel are magnetic. • Aluminium and copper are non-magnetic
	How do magnetic poles work?	<ul style="list-style-type: none"> • The ends of a magnet are called poles. • One end is called the north pole and the other end is called the south pole. • Opposite poles attract, similar poles repel. • If you place two magnets so the south pole of one faces the north pole of the other, the magnets will move towards each other. This is called attraction. • If you place the magnets so that two of the same poles face each other, the magnets will move away from each other. They are repelling each other.

Vocabulary	
Attract	If one object attracts another object, it causes the second object to move towards it.
Friction	The resistance of motion when there is contact between two surfaces.
Force	The pulling or pushing effect that something has on something else.
Gravity	An invisible force that pulls objects toward each other. Earth's gravity is what keeps you on the ground and what makes things fall.

