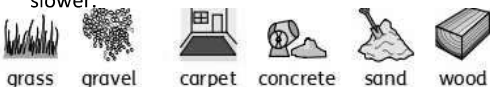

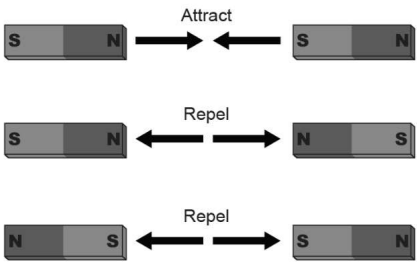


Topic: Forces and Magnets		Year: 3	Strand: Physics																																						
<div>What should I already know?</div> <ul style="list-style-type: none">• The shape of some materials can be changed when they are stretched, twisted, bent and squashed.• Know how different toys move.• Know what 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.		<div>What will I know by the end of the unit?</div> <div>What are forces?</div> <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.																																							
<div>Vocabulary</div> <table><tr><td>attract</td><td>If one object attracts another object, it causes the second object to move towards it</td></tr><tr><td>bendy</td><td>an object that bends easily into a curved shape</td></tr><tr><td>friction</td><td>the resistance of motion when there is contact between two surfaces</td></tr><tr><td>force</td><td>the pulling or pushing effect that something has on something else</td></tr><tr><td>gravity</td><td>the force which causes things to drop to the ground</td></tr><tr><td>magnet</td><td>a piece of iron or other material which attracts magnetic materials towards it</td></tr><tr><td>magnetic field</td><td>an area around a magnet, or something functioning as a magnet, in which the magnet's power to attract things is felt</td></tr><tr><td>metal</td><td>a hard substance such as iron, steel, gold, or lead</td></tr><tr><td>motion</td><td>the activity of changing position or moving from one place to another</td></tr><tr><td>non-magnetic</td><td>an object that is not magnetic</td></tr><tr><td>opposite</td><td>Opposite is used to describe things of the same kind which are completely different in a particular way. For example, north and south are opposite directions</td></tr><tr><td>position</td><td>The position of someone or something is the place where they are in relation to other things</td></tr><tr><td>pull</td><td>When you pull something, you hold it firmly and use force in order to move it towards you or away from its previous position</td></tr><tr><td>push</td><td>When you push something, you use force to make it move away from you or away from its previous position</td></tr><tr><td>resistance</td><td>a force which slows down a moving object or vehicle</td></tr><tr><td>squash</td><td>pressed or crushed with such force that something loses its shape</td></tr><tr><td>stretchy</td><td>slightly elastic</td></tr><tr><td>surface</td><td>the flat top part of something or the outside of it</td></tr><tr><td>twist</td><td>turn something to make a spiral shape</td></tr></table>		attract	If one object attracts another object, it causes the second object to move towards it	bendy	an object that bends easily into a curved shape	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	the force which causes things to drop to the ground	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	metal	a hard substance such as iron, steel, gold, or lead	motion	the activity of changing position or moving from one place to another	non-magnetic	an object that is not magnetic	opposite	Opposite is used to describe things of the same kind which are completely different in a particular way. 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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. <div></div>	
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<div>Investigate!</div> <ul style="list-style-type: none">• Investigate the amount of friction created by different surfaces. Use measures (such as length and time) to show how far or fast an object travels.• Compare how different things move and group them.• Observe how a magnetic field attracts iron filings by using a bar magnet.• Investigate how magnets are used in everyday life.• Investigate which materials are magnetic and sort between objects that are magnetic and those that are non-magnetic.• Investigate if the size of a magnet affects how strong it is (using chains of paper clips of varying lengths)• Investigate if all metals are magnetic.• Observe what happens when magnets with similar poles are placed next to each. Repeat this for when the poles are different.																																									