

Year3				
Topic	Prior Learning	Present learning	Misconceptions	Future learning
<p>Forces and magnets</p> <p>National Curriculum</p> <ul style="list-style-type: none"> • Compare how things move on different surfaces. • Notice that some forces need contact between two objects, but magnetic forces can act at a distance. • Observe how magnets attract or repel each other and attract some materials and not others. • 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. • 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"> • Explore how things work. (Nursery – Forces) • Explore and talk about different forces they can feel. (Nursery – Forces) • Talk about the differences between materials and changes they notice. (Nursery – Forces) • Explore the natural world around them. (Reception – Forces) • Describe what they see, hear and feel whilst outside. (Reception – Forces) • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials) 	<p>Knowledge and Understanding–</p> <ul style="list-style-type: none"> • -the different types of forces • -that some forces need contact between 2 objects, but magnetic forces can act at a distance • -that magnets can attract and repel • -what magnetic poles are • - how Earth acts as magnet • -the uses of magnets <p>Investigations:–</p> <ul style="list-style-type: none"> • -plan a fair test to investigate the strength of magnets • - investigate magnetic and non-magnetic material(which material will you use to manufacture a fridge) • - investigate which metal will you use to make microwave doors • -investigate properties of a magnet <p>Vocabulary:</p> <p>property magnetism push pull poles attract repel</p>	<p>Some children may think:</p> <ul style="list-style-type: none"> • the bigger the magnet the stronger it is • all metals are magnetic. 	<ul style="list-style-type: none"> • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. (Y5 - Forces) • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. (Y5 - Forces) • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. (Y5 - Forces)