



St. Francis Xavier's RC Primary School

Science Unit Guidance and Formative Assessment

Year Group:	5 Spring 1	Subject:	Science
Unit:	<p>Forces</p> <p>Catch-Up from Year 3 (See Year 3 MTP)</p> <p>Compare the force of friction on different surfaces.</p> <p>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.</p> <p>Describe how a magnet has two poles: a north pole and a south pole</p> <p>Predict whether two magnets will attract or repel each other based on the direction of the poles attract some materials and not others.</p>	Prerequisite Learning and Curriculum Links	<p>EYFS ELG The Natural World Explore the natural world around them, making observations; know some similarities and differences between the natural world around them and contrasting environments; understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>The World: discuss how things work</p> <p>Y2: materials- how materials can be manipulated</p> <p>Y3: forces and magnets: describe how objects move</p> <p>Curriculum Links in Year 5</p> <p>Design Technology: using Cams to make a moving toy</p> <p>Science: Space- relationship between weight and mass</p>

ROCKS (Remembering Our Curriculum Knowledge and Skills)	
Distinguish whether a force is a 'push' or a 'pull' and name the forces acting on an object	
Gravity is the force that pulls unsupported objects towards the Earth first discovered by Isaac Newton	
Identify the effects of friction, air resistance and water resistance are to slow down moving objects	
Some mechanisms (including levers, gears and pulleys) allow a small force to have a greater effect	
Progressive Journey:	Skills:
Recall how a force is a push or a pull and distinguish between the two Recognise balanced and unbalanced forces and identify present forces Investigate the relationship between weight and mass using Newton meters Research Isaac Newton; his life and discoveries Experiment with air resistance to find which size or shape of objects have the most air resistance and which are aerodynamic Plan and conduct an experiment to measure the impact of water resistance Use different levers and pulleys to learn how forces can be manipulated	Raise questions about moving objects and answer based on inquiry Plan own investigations and ensure these are a fair test Measure data using a stopwatch and Newton meter Present data and results using diagrams, line and bar graphs Working systematically to complete an investigation, keeping control variables the same Draw conclusions from results Testing predictions and hypothesis Research famous scientists and present results through presentations or text
Key Vocabulary Force, push, pull, friction, air resistance, water resistance, gravity, aerodynamic, streamline, balanced, unbalanced, Isaac Newton Weight, mass, Newton meter, relationship, variable, systematic Mechanisms, levers, gears, pulleys	