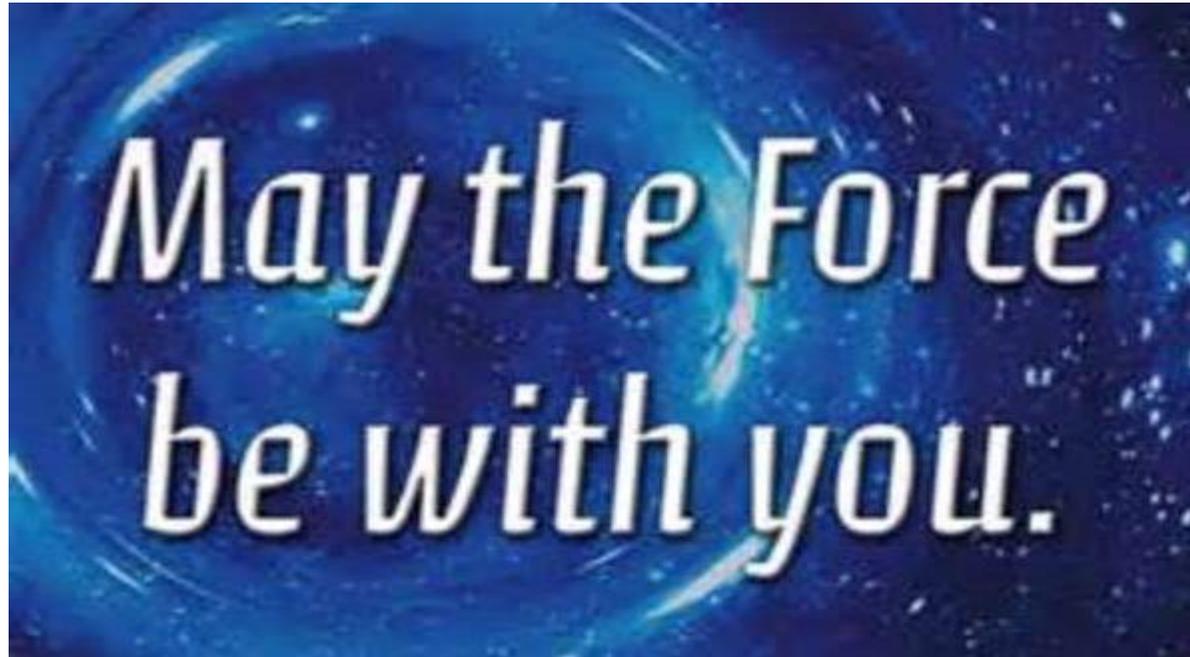


Spring 1 – Foundation Overview (6 weeks)

'May The Force Be With You'



Topic Overview

This is a science based topic. The children will have lots of opportunities to learn, predict, and experiment with forces such as magnetism and friction.

Assessment Criteria (Set against NC strands)	Assessment Criteria (In context to this unit)
<p><u>Year 3 Science objectives:</u></p> <ol style="list-style-type: none"> 1) setting up simple practical enquiries, comparative and fair tests 2) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers 3) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 4) identifying differences, similarities or changes related to simple scientific ideas and processes 5) using straightforward scientific evidence to answer questions or to support their findings 6) asking relevant questions and using different types of scientific enquiries to answer them 7) using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions <p><u>KS2 DT objectives:</u></p> <ol style="list-style-type: none"> 1) I can use research to inform the design of innovative, functional, appealing products that are fit for purpose. 2) I can select from and use a wider range of tools and equipment to perform practical tasks accurately 3) I can select from and use a wider range of materials and components 4) I can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p><u>KS2 PSHE objectives:</u></p> <ul style="list-style-type: none"> ▪ I can tell you about a person who has faced difficult challenges and achieved success ▪ I can identify a dream/ambition that is important to me (Link to MOLIMA) 	<p><u>Science context</u></p> <ol style="list-style-type: none"> 1) compare how things move on different surfaces 2) observe how magnets attract or repel each other and attract some materials and not others 3) Write up data from experiments testing magnetic field strengths 4) 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 5) describe magnets as having 2 poles notice that some forces need contact between 2 objects, but magnetic forces can act at a distance 6) Identify which surface will produce the most friction 7) predict whether 2 magnets will attract or repel each other, depending on which poles are facing. <p><u>Design Technology context</u></p> <ol style="list-style-type: none"> 1) Research and plan a marble run design 2) Use a selection of cutting tools and joining techniques 3) Choose a selection of materials to create marble run – choose different surfaces to make run more efficient. 4) Assess effectiveness of own and other's work <p><u>KS2 PSHE context:</u></p> <p>I respect and admire people who overcome obstacles and achieve their dreams and goals (e.g. through disability)</p>

<ul style="list-style-type: none"> ▪ I enjoy facing new learning challenges and working out the best ways for me to achieve them ▪ I am motivated and enthusiastic about achieving our new challenge ▪ I can recognise obstacles which might hinder my achievement and can take steps to overcome them ▪ I can evaluate my own learning process and identify how it can be better next time 	<p>I can imagine how I will feel when I achieve my dream/ambition I can break down a goal into a number of steps and know how others could help me to achieve it I know that I am responsible for my own learning and can use my strengths as a learner to achieve the challenge I can manage the feelings of frustration that may arise when obstacles occur</p> <p>I am confident in sharing my success with others and can store my feelings in my internal treasure chest</p>	
<p><u>Relationships to the wider world</u> Where do we use magnets in real life? Thinking about the world as a magnet. How do forces affect our day to day lives.</p>	<p><u>Opportunities to show Super Learning powers</u> Respect – evaluating other people’s DT projects Responsible – using different tools safely when making the marble runs</p>	
<p><u>Vocabulary</u> <u>Tier 2 –</u> Attract/ strength/ observe/ predict/ hypothesise/ conclude/ conclusion/ materials/ evaluate/ design/ <u>Tier 3 –</u> Magnets/ poles/ magnetic fields/ friction/ venn diagram/ north pole /south pole/ repel</p>	<p><u>Prep/homework related tasks</u></p> <ol style="list-style-type: none"> 1) Create a fact file about magnets 2) Make a working compass or magnet and write instructions/draw diagrams of the process 3) Create a poem about forces/magnetism 	
<p><u>SMSC</u> How could we use magnets to help solve problems in our day to day word?</p>	<p><u>British Values</u> NA</p>	<p><u>Trips/Hooks</u> Make a needle into a magnet.</p>
<p><u>Key questions</u> What are magnets? What do forces do? What do the words attract and repel mean? Why are some materials attracted to magnets and some are not? What can affect how objects move on different surfaces? What is a magnetic field? Are all metals magnetic?</p>	<p><u>Assessment Answers</u> A magnet is an object or material where all the atoms are lined up to produce a magnetic field. Forces can cause objects to act in different ways – eg to move or stop. The insides of many metals are not lined up so aren’t attracted Friction can affect how things move on surfaces. The space round a magnet when things are attracted to it is called the magnetic field. No. Any metal containing iron is magnetic.</p>	