



Medium-Term Planning Format		
Cohort	Year 3	
Enquiry Question (QUESTIONING)	Is the force strong with you?	
Enquiry Driver	Science	
Enquiry Enhancer	D&T	
Main Enquiry Theme	Forces and magnets	
National Curriculum Objective	<p><b><u>Science (Forces and magnets)</u></b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Compare how things move on different surfaces.</li> <li>• Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</li> <li>• Observe how magnets attract or repel each other and attract some materials and not others.</li> <li>• 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.</li> <li>• Describe magnets as having two poles.</li> <li>• Predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul> <p><b><u>Design and Technology</u></b></p> <p>When designing and making, pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> <li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li> <li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul>	
Key Knowledge and Skills (driver)	<ul style="list-style-type: none"> <li>• Can they observe that magnetic forces can be transmitted without direct contact?</li> <li>• Can they talk about how some magnets attract or repel each other?</li> <li>• Can they classify which materials are attracted to magnets?</li> <li>• Can they describe the speed and direction of moving objects?</li> </ul>	
Key Knowledge and Skills (enhancer)	<ul style="list-style-type: none"> <li>• Can I describe a design using an accurately labelled diagram?</li> <li>• Can I measure, mark out, assemble and join materials and components with some accuracy?</li> <li>• Can I choose materials for a purpose?</li> </ul> <p><i>(Children will design and create robots by selecting from different materials and learning how to join and strengthen them)</i></p>	

<b>Main Text</b>	<ul style="list-style-type: none"> <li>• The Iron Man by Ted Hughes</li> <li>• No-Bot by Sue Hendra</li> <li>• Robots by Melissa Stewart</li> </ul>												
<b>Main Writing Genre</b>	Poetry          Narrative	<p>The children will explore different forms of poetry, including caligrams and shape poems.</p> <p>The children will be writing a story about a robot that malfunctions and causes chaos.</p> <div data-bbox="1292 600 1436 801"> <p><b>KS2- NARRATIVE</b></p> <ul style="list-style-type: none"> <li>Opening-Setting</li> <li>Build up</li> <li>Problem/dilemma</li> <li>Build up</li> <li>Problem/dilemma</li> <li>RESOLUTION</li> <li>CONCLUSION</li> </ul> </div>											
<b>Enquiry Hook (Questioning) [Experiences/experts]</b>	Lego Robotics coming into school to build Lego robots with the children.												
<b>Subsidiary Enquiries</b>	<table border="1" data-bbox="491 992 1369 1272"> <tr> <td><b>LC1</b></td> <td>What do magnets do?</td> </tr> <tr> <td><b>LC2</b></td> <td>Why do some magnets attract and some repel?</td> </tr> <tr> <td><b>LC3</b></td> <td>What are magnets used for?</td> </tr> <tr> <td><b>LC4</b></td> <td>What is artificial intelligence?</td> </tr> <tr> <td><b>LC5</b></td> <td>How are robots helpful to humans?</td> </tr> </table>			<b>LC1</b>	What do magnets do?	<b>LC2</b>	Why do some magnets attract and some repel?	<b>LC3</b>	What are magnets used for?	<b>LC4</b>	What is artificial intelligence?	<b>LC5</b>	How are robots helpful to humans?
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<b>Reflection of Learning (SHARING)</b>	Poetry performance afternoon: the children will share/perform their robot poems (parents will be invited).												
<b>Potential Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>• A force is a push or a pull on an object.</li> <li>• A force can cause something to speed up, slow down, change shape or change direction.</li> <li>• Magnets are objects that push or pull things with an invisible force called magnetism.</li> <li>• The ends of a magnet are called ‘poles’: one end is the north pole and the other is the south pole.</li> <li>• North pole and south pole (opposites) attract and two poles that are the same will repel.</li> <li>• Magnets can be found in many everyday devices such as computers, televisions, microwaves and refrigerators.</li> <li>• A robot is a machine that does tasks without the help of a person.</li> <li>• George Devol invented the first digitally operated and programmable robot in 1954.</li> </ul>												

**Knowledge Mat**

**Year 3 Knowledge Organiser (Spring 2): Is the force strong with you?**

Subject specific vocabulary		Silly knowledge about magnets and robots
Artificial intelligence	The design and development of computer systems able to perform tasks which normally need human intelligence.	A force is a push or a pull on an object.
Attract	When two magnets (a north and a south pole) or a magnet and a magnetic material are drawn towards each other.	A force can cause something to speed up, slow down, change shape or change direction.
Compass	An instrument containing a magnetised needle which shows the magnetic direction of north.	Magnets are objects that push or pull things with an invisible force called magnetism.
Force	Pushes and pulls in particular directions.	The ends of a magnet are called 'poles' - one end is the north pole and the other is the south pole.
Friction	The act of one surface rubbing against another.	North pole and south pole (opposites) attract and two poles that are the same will repel.
Gravity	A force that pulls all things towards the centre of the Earth.	Magnets can be found in many everyday devices such as computers, televisions, microwaves and refrigerators.
Magnetic	The power of a magnet.	A robot is a machine that does tasks without the help of a person.
Magnetic field	A region around a magnetic material.	George DeJong invented the first digitally operated and programmable robot in 1954.
North pole	The pole of a magnet that faces the north when able to spin freely.	
Repel	When two magnets (a north and a north or a south and a south) push a force to push away from each other.	
South pole	The pole of a magnet that faces south when able to spin freely.	

**Exciting Books**

**Learning Challenges**

LC1	What do magnets do?
LC2	Why do some magnets attract and some repel?
LC3	What are magnets used for?
LC4	What is artificial intelligence?
LC5	How are robots helpful to humans?

**Other curriculum areas which are to be taught discretely:**

**Religious Education**

- What kind of world did Jesus want?**
- Can I identify texts that come from a Gospel, which tells the story of the life and teaching of Jesus?
  - Can I make clear links between the calling of the first disciples and how Christians today try to follow Jesus? (and be 'fishers of people')
  - Can I suggest ideas and then find out about what Jesus' actions towards outcasts mean for a Christian?
  - Can I give examples of how Christians try to show love for all, including how Christian leaders try to follow Jesus' teaching in different ways?
  - Can I make links between the importance of love in the Bible stories studied and life in the world today, giving good reasons for my ideas?

**PSHCE**

- Understanding others, understanding me and looking after me**
- What do I do when my friend is sad?
  - Who do my actions affect?
  - What are my relationship rights and responsibilities?
  - How do I raise my concerns?
- (see Talking Points curriculum for the full programme breakdown)*

**Music**

*See the Charanga programme for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.*

**Unit 4: The Dragon Song**

**Physical Education**

- Net and Wall e.g. badminton, tennis and volleyball**
- Can I stop/catch a ball with reasonable control?
  - Can I pass a ball to another person with some accuracy?
  - Can I take part in opposed conditioned games?
  - Can I consolidate my striking skills and improve my control and quality?
  - Can I select and apply appropriate skills and simple tactics in net and wall games?
  - Can I follow the rules of a net and wall games?

<b>Computing</b>	<p><i>See DB Primary Programming for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.</i></p> <p><b>Unit 16: Computer Science and Programming</b></p>		
<b>MFL</b>	<p><i>See the Primary Languages Network programme for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.</i></p> <p><b>Unit 4: Carnival and Playground Games</b></p>		
<b>Additional Links</b>	<b>British Values</b>	<b>Outdoor Learning</b>	<b>Community</b>
			Recycling in school.
	<b>Citizenship (Beaver Pledge)</b>	<b>Global Neighbours</b>	<b>Home Learning</b>
To be an eco-warrior.		Creating their own robot from magnetic/recyclable materials.	