EDEN Academy Trust
Working together to make a difference

**Science Curriculum – Cycle B**
Lower Key Stage 2 – Summer 1

Theme – Forces and Magnets (Physics)

Enquiry Question – How does a magnet work?

National Curriculum Coverage

Pupils should be taught to:
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.

| **Key Scientists:**<br><br>Galileo | **Comparative Test**<br><br>Which magnet is strongest?<br><br>**Fair Test**<br><br>Does the mass of an object affect how much force is needed to make it move? | **Observation over time**<br><br>If we magnetise a pin, how long does it stay magnetised for? | **Pattern Seeking**<br><br>Does the shape of a magnet affect how strong it is? | **Research**<br><br>How does a compass work? |
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| Objective | Challenge | Working Scientifically | Vocabulary |
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| • To know that some forces need contact between two objects<br>- To know forces are pushes or pulls in a particular direction<br>- opening a door, pushing a swing etc.<br><br>• To compare how things move on different surfaces<br>- To observe what happens to an object on different surfaces (smooth, rough/bumpy)<br><br>• Describe magnets as having two poles<br>- To know magnets have a north and south pole<br>- To explore a range of different magnet types (bar, horseshoe, ring, button) and their uses | • To identify the effects of friction<br><br>• To investigate the strengths of different magnets and find fair ways to compare them<br><br>• Look for patterns in the way magnetic materials behave<br><br>• To explain why different magnets have different uses<br><br>**or own challenges* | See separate objectives sheet. | Force, push, pull, open, surface, magnet/magnetic, attract, repel, magnetic poles, north, south, direct contact, materials |

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| • To know that magnetic forces can act at a distance<br>- To compare different magnet strength<br><br>• To observe how magnets attract or repel each other and attract some materials and not others<br>- To know that opposite poles will attract, same poles will repel<br><br>• To predict whether two magnets will repel or attract each other depending on which poles are facing<br><br>• To name some magnetic materials<br>- To know that iron, steel (contains iron), nickel and cobalt are magnetic metals<br>- To know that not all metals are magnetic (aluminium, copper and gold)<br><br>• To compare and classify a variety of everyday materials on the basis of whether they are attracted to a magnet | | | |