

*Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.*



**Forton Primary School**  
**Science**

Clougha Class  
Summer 2  
Year A

**N.C. LINKS:**

**Forces and Magnets** 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 Concept: Forces and Magnets

Key Questions: How do things move?  
Are magnets useful?

Unit Overview:

Magnetic Forces.

Vocabulary:

Forces, friction, surface, magnet, magnetic, magnetic field, poles, repel, attract.

. New Knowledge Progression:

- Compare how some things move on different surfaces.

Building on Prior learning KS1:

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- 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 (like and unlike poles).
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, water, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (applying a force).
- Some materials can be found naturally; others have to be made.

### **Key Skills (Disciplinary)**

- Suggest their own ideas on a concept and compare these with what they observe / find out.
- Use observations to suggest what to do next.
- Discuss ideas and develop descriptions from their observations using relevant scientific language and vocabulary.
- Ask / raise their own relevant questions with increasing confidence and independence that can be explored, observed, tested or investigated further.
- Choose / select a relevant question that can be answered [by research or experiment / test].
- Make decisions about which information to use from a wide range of sources and make decisions about how to present their research.
- Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.
- Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.
- Suggest their own ideas on a concept and compare these with models or images.
- Make some decisions about an idea within a group (*e.g. I think we should find out by testing...*)
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### **Sequence of Lessons:**

1. LO – To identify the forces acting on objects.

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2. LO – To investigate and compare how objects move on different surfaces.
3. LO – To sort magnetic and non-magnetic materials.
4. LO – To investigate the strength of different magnets.
5. LO – To explore magnetic poles.
6. LO – To observe how magnets attract some materials.

Enhancements:

The Science and Industry Museum.

End of Unit Outcome:

Create a poster about forces and make their own magnetic game using their knowledge of what they've learnt from this unit.