Science Overview – Forces and Magnets

Year 3/4 Cycle B

Autumn 2

Key Question: How has life changed over time?

National Curriculum

• 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.

SUBSTANTIVE KNOWLEDGE

- Know that forces will change the motion of an object- start, stop, speed up etc.
- Know the difference between a pushing and a pulling force.
- Know what friction is.
- Know that different surfaces can create different amounts of friction.
- Know what a magnet is and that like poles repel, and opposites attract.
- Know that some materials are magnetic and some are not.

Key words:	**forces friction magnetic**
Vocabulary:	surface, magnet, magnetic field, poles, repel, attract
Working scientifically	• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. • Gather, record, classify and present data in a variety of ways to help in answering questions
Enquiry type to cover and enquiry question	**Identifying, grouping and classifying (enquiry type)** Which materials are magnetic?
Learning Milestones /Assessment	I can… • explain what a force is. • describe what a force can do. • identify a push and a pull. • name some magnetic metals. • explain what happens when poles of a magnet are put together.