Science Overview – Forces and Magnets

Year Three

Autumn Term

Key Question: Are we more the same or more different to stone age humans?

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

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

Key Vocabulary	forces, friction, surface, magnet, magnetic, magnetic field, poles, repel, attract
Previous year groups key vocabulary:	First taught in Y3.
Disciplinary Concepts	• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. •
Enquiry type to cover and enquiry suggestion	**Comparative and fair testing (enquiry type)** How does the mass of an object affect how much force is needed to make it move?
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.