Our Science curriculum aims to enthuse children and hep them to be curious and develop a sense of excitement about the world. Through a range of teaching, learning and extra-curricular opportunities, children will develop scientific knowledge and conceptual understanding to recognise the uses and implications of Science, today and for the future. We encourage children to ask their own questions; predict how things will behave and analyse causes, using Science to explain what is happening.

Inspiring and enabling our school community to live life to the full

YEAR 3 SCIENCE

Forces: Friction and Magnets

Characteristics of an Effective Learner

Courage
Commitment
Collaboration
Creativity
Curiosity

Prior Learning:

- Children explore animals' diets and classify them into carnivores, herbivores and omnivores in year 1
- Children Know how animals in all habitats depend on plants and each other for food by creating simple food chains in year 2
- In year 3, children explore different types of food, sorting them into different categories and planning meals. They begin to understand that different people may have different energy/nutritional requirements e.g. athletes or explorers.

Key Vocabulary taught in this unit:

Contact, pendulum, pull/pulling, push/pushing, rough, slide, smooth, surface, texture, stopwatch, value, attract, contact force, force, like poles, magnet, magnetic, non-contact force, north/south pole, repel, classify/classification, comparative test, data, diagram, enquiry, evidence, measure/measurement, pattern, predict/prediction, test, material.

Key Questions:
Q1: What makes it move?
Q2: How long does a top spin on different surfaces?
Q3: How well can an object slide on different surfaces?
Q4: How do magnets affect each other?
Q5: Which materials are magnetic?
Q6: How strong are the magnets?

Intent: What do we want the children to know and be able to do by the time they complete this unit?
1: A force is a push or pull that can make something move.
2: The surface on which a spinning top is moving affects how long it spins for.
3: The surface on which an object rests affects how it slides.
4: Magnets have a north and a south pole. Unlike poles attract and like poles repel each other.
5: Some metals are attracted to a magnet and are known as 'magnetic'. Other materials are not.
6: The strength of magnets varies and can be tested using the idea that magnetic forces act at a distance.

Working Scientifically:

- Setting up simple practical enquiries, comparative [and fair] tests.
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, [using a range of equipment, including thermometers and data loggers].
- 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].
- Identifying differences, similarities [or changes] related to simple scientific ideas and processes.
- Using straightforward scientific evidence to answer questions or to support their findings.

Impact / Outcome: What will the final product / result be?

Children will learn about the methods scientists use to build scientific knowledge. They will learn that scientists sometimes imagine possibilities to solve a problem.

They will develop an understanding of the following types of enquiry: pattern seeking, identifying and classifying , simple comparative testing.

P4C Inquiry (where appropriate):