

Subject	Science
Term	Spring
Duration (Approx)	6 Weeks
Module	Electricity and Magnetism

Skills and concepts to be developed and assessed (linking to identified AOs)

- We use electricity in our everyday lives. This topic aims to explain more about the science concepts involved.
- The practical work includes static electricity, making circuit in pairs using a range of components and taking measurements using analogue and digital meters, investigating the magnetic fields around bar magnets and creating an electromagnet.
- The mathematical relationship between voltage, current and resistance is used for calculations of these variables to answer problem-solving questions.

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Static electricity, fields and charges
- Series and parallel circuits
- Measuring electrical current and voltage
- Relationship between voltage, current and resistance
- Magnetic forces and the Earth's magnetic field
- Electromagnets and their uses

Formative Assessment/key piece of work prior to end of unit:

- Graded written work with constructive feedback
- Accurate scientific circuit diagrams, tables of results and conclusions
- Calculations

Summative Assessment:

- End of unit test



Building Retention: What prior learning must be built upon/revisited and how will it be assessed?

- Electricity is studied in year 4 and 6 where pupils make simple circuits. Magnetism is studied in Year 3.
- In KS3: They make their own more complex circuits and take quantitative measurements.

Spelling-Punctuation-Grammar How will you promote high standards within this module?

- Literacy: Vocabulary and definitions. Reinforce spellings by sorting out letter arrangement.
- Drafting work
- Accurate vocabulary / glossary use
- Word walls and lists

Link forward: where next for the learning?

- Pupils will transfer Scientific skills and knowledge to other topics and subjects in the KS3 curriculum, as well as their GCSE Science.



Subject	Science
Term	Spring
Duration (Approx)	6 Weeks
Module	Forces

Skills and concepts to be developed and assessed (linking to identified AOs)

- Scientifically, forces (including weight) are measured in Newtons. In this topic we explore forces by experimenting with masses, helium balloons, simple machines and more.
- This topic introduces the use of mathematical formulas in Science. Pupils rearrange equations to solve problems. We also use, and plot, line graphs to represent data and these relationships.

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Measuring and representing Forces
- Gravity and Weight
- The relationship between average speed, distance and time
- Balanced and unbalanced forces
- Simple machines
- Turning forces and calculating moments
- Pressure, including for liquids and gases

Formative Assessment/key piece of work prior to end of unit:

- Graded written work.
- Key 'Working Scientifically' skills such as doing investigations, tables of results, plotting graphs and reaching conclusions.
- Calculations

Summative Assessment:

- End of unit test

Building Retention: What prior learning must be built upon/revisited and how will it be assessed?

- In the latest National Curriculum, Forces are studied as KS2 topics in Years 3 and 6. We build on this learning and the pupil's growing scientific and mathematical skills

Spelling-Punctuation-Grammar How will you promote high standards within this module?

- Literacy: Vocabulary and definitions. Reinforce spellings by sorting out letter arrangement.
- Drafting work
- Accurate vocabulary / glossary use
- Word walls and lists

Link forward: where next for the learning?

- Pupils will transfer skills and knowledge to other topics and subjects in the KS3 curriculum and to their GCSE science study