

Year:7 Subject: Science

IMPLEMENTATION

<p>INTENT (including key concepts and skills)</p>	<p>Half Term 1 Context: E1 - Energy and Introduction L1 - Life processes: cells, Tissues and organs</p> <p>Key Vocabulary: Energy, Joule, renewable, non-renewable, dissipation, vibration, vacuum, amplitude, crest, trough, oscilloscope, absorption, longitudinal, transverse. Prior Learning: Light reflection, shadows, Cultural Capital: Felix Baumgartner and reducing greenhouse gasses</p> <p>Key Vocabulary Cell, tissue, organ system, organism, muscular, skeletal, joint, mitochondria, nucleus</p> <p>Prior Learning: The body is made up of cells and organs which have different roles within the body.</p>	<p>Half Term 2 Context: P1 - States of matter I1 - Interdependence: Ecological relationships</p> <p>Key Vocabulary: State, mixture, evaporate, sublimation, element, compound. Prior Learning: Properties and changes of materials.</p> <p>Key Vocabulary: Producer, consumer, prey, predator, energy. Food chains/webs. Cultural Capital: Ecosystem and environment – impact on food chains/webs – endangered/extinct organisms.</p>	<p>Half Term 3 Context: E2 - Energy in circuits L2- Life processes: Reproduction</p> <p>Key Vocabulary: Electrons, cell, ammeter, voltage, current, series, parallel. Prior learning: Push and pull forces, magnets.</p> <p>Key Vocabulary urethra fertilisation, gamete, penis, vagina, sperm, ovary, zygote. Cultural Capital: Sex and relationship education (SRE). Variation from parents.</p>	<p>Half Term 4 Context: R1- Reactions: an introduction F1 Forces: an introduction</p> <p>Key Vocabulary: Reversible, acid, alkali, oxygen, hydrogen, carbon dioxide, test tubes.</p> <p>Prior learning: Gases in the atmosphere.</p> <p>Cultural Capital: Global warming.</p> <p>Key Vocabulary: Speed, resultant, newton, equilibrium, distance, gravitational.</p> <p>Prior Learning Gravitational attraction, air resistance and friction, simple force multipliers.</p> <p>Cultural Capital: Newton's laws</p>	<p>Half Term 5 Context: P2 - Particles in solution R2 - Acids and alkalis</p> <p>Key Vocabulary: Sublimation, solute, solution, dissolving.</p> <p>Prior Learning: Properties and changes of materials.</p> <p>Key Vocabulary: Reversible, acid, alkali, neutralisation, oxidation, indicator, corrosive.</p> <p>Prior learning: Different substances taste differently according to acid contained within.</p> <p>Cultural capital: Acids are not always dangerous e.g. ethanoic acid, citric acid.</p>	<p>Half Term 6 Context: F2 - Forces in Space I2 Interdependence: Classification and adaptation</p> <p>Key Vocabulary: satellite, asteroid, constellation, orbiting, planets Prior Learning Gravitational attraction, planets in space.</p> <p>Key Vocabulary: Classification, mammals, vertebrate, invertebrate, reptiles, amphibians, adaptations, environment.</p> <p>Prior learning: Animals with and without backbones and camouflage.</p> <p>Cultural Capital: How animals are grouped in zoos and the importance of diversity.</p>
Applying knowledge and understanding to explain observations	X	X	X	X	X	X
Use different types of scientific enquiry to answer scientific questions	X	X	X	X	X	X
Use technical terminology with confidence accuracy and precisely	X	X	X	X	X	X
Apply mathematical knowledge to scientific understanding	X	X	X	X	X	X
Aware of some of the social and economic implications of science	X	X	X	X	X	X

<p style="text-align: center;">IMPACT</p>	<p>Assessment: L1, E1, Scientific skills B1 Progression to KS4: Energy and energy resources, Electricity in the home, Wave properties Atomic structure, periodic table, molecules and matter. Scientific enquiry.</p>	<p>Assessment: I1, P1, Scientific skills B2 Progression to KS4: Ecosystems, biodiversity, reproduction, variation. Scientific enquiry. Chemical analysis, bonding. Earth's resources. Scientific enquiry.</p>	<p>Assessment: E2, L2, Scientific skills B3 Progression to KS4: Electricity in the home, Reproduction, variation, genotypes, inherited diseases. Scientific enquiry.</p>	<p>Assessment: I1, P2 Scientific skills B4. Progression to KS4: Waves and forces leading to momentum. Chemical reactions, titrations and calculations based upon reactions. Scientific enquiry</p>	<p>Assessment: I2, P2, Scientific skills B5 Progression to KS4: Chemical analysis, indicators, strong and weak acids. Chemical bonding. Scientific enquiry</p>	<p>Assessment: F2, I2 + Summer summative to include all topics studied during the year. Progression to KS4: Ecosystems, biodiversity, reproduction, variation. Space, expanding universe, big bang and evidence for the big bang. Scientific enquiry.</p>
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Cultural Capital is the body of knowledge a student needs so that they can flourish in the future and not be left behind.

Some topics are taught in a different order so that there are enough resources for each class to complete practical activities.