

KS2 Prior Science Knowledge

- Planning different types of scientific enquiries to answer questions
- Taking measurements, using a range of scientific equipment
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using test results to make predictions to set up further comparative and fair tests

Rotation

Topics are taught on a rotation per term in science. Each class will study each of these topics described but may be in a different order.



Particles: Particle model and how it explains density, changes in state and thermal conductivity

Respiration: Aerobic and anaerobic respiration, effects of smoking, asthma and drugs

Chemical Reactions: Difference in chemical and physical reactions, compounds definition, formula and equations, conservation of mass, combustion, oxidation and thermal decomposition

Electricity: Static electricity, designing and building circuits, current, potential difference and resistance, intro to series and parallel circuits, insulators and conductors



Assessments

Assessments will happen at the end of each project to ensure key knowledge is remembered. To include knowledge recall, skills and extended writing.



1

Autumn Term



How to be a scientist: Health and safety, working in lab, how to plan and carry out a practical

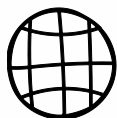
Energy: Energy resources, how we generate electricity, energy costs, energy stores and transfers

Cells and Organisation: Cell structures and function, use of microscopes, specialised cells, organisation of organisms

Atoms, Elements and Periodic Table: Intro to the periodic table, physical and chemical properties, atoms and elements

2

Spring Term



Electricity continued

Reproductive Systems: Male and female reproductive systems, gametes, fertilisation, development of the fetus, role of placenta and birth, plant reproduction

Pure and Impure Substances: Pure substances, mixtures, solutions, diffusion, separation techniques (filtration, crystallisation, distillation, chromatography)

Revision of Energy, Cells and Organisation, Atoms, Elements and Compounds

3

Summer Term

Skills Development, Key knowledge:

- Experimental planning
- Data collection and analysis
- Scientific evaluation
- Calculations