KS3 Science Curriculum 2024-25

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|  | **Year 7** | **Year 8** | **Year 9** |
|  | Knowledge and skills | Enrichment | Knowledge and skills | Enrichment | Knowledge and skills | Enrichment |
| Cycle 1 | **Science skills**How to be safe in a lab. Key skills.**Biology - Cells**Plant and animal cells.**Chemistry - Particle model**States of matter and changes of state.**Physics - Forces**Types of forces. Balanced and unbalanced forces. |  | **Biology - Health & lifestyle**Effects of diet and smoking**Chemistry - The periodic table**How we organise the elements..**Physics - Electricity & magnetism**Circuits, electrical components and magnets. |  | **Biology - Inheritance**Genes, DNA and natural selection.**Chemistry - The Earth**The structure of the Earth, rocks and climate.**Physics - Motion**How and why do things move. Measuring speed. |  |
| Cycle 2 | **Biology - Body systems**The parts of the body and their functions.**Chemistry - Atoms, elements and compounds, and chemical reactions**What everything is made from and how certain chemicals combine.**Physics – Sound and Light**Sound and light as waves and their properties. | British Science Week | **Biology - Biological processes**Respiration and photosynthesis.**Chemistry - Separation techniques**Filtration, evaporation and chromatography.**Physics - Energy**Energy stores and transfers. Energy resources. | British Science Week | **Biology – Biological processes**Aerobic and Anaerobic respirationFactors affecting photosynthesis.**Chemistry – Chemical reactions**Word and symbol equations. Conservation rules.**Physics – turning forces**Force multipliers and moments | FameLAB Academy(Science presentation competition)British Science Week |
| Cycle 3 | **Biology - Reproduction**How animals and plants reproduce. The menstrual cycle.**Chemistry - Acids and alkalis**The pH scale. Neutralisation and making salts.**Physics - Space**What’s out there. Why we have day and night and the seasons. |  | **Biology - Ecosystems and adaptation**Organisation of ecosystems. Importance of biodiversity.**Chemistry - Metals and other materials**Properties and uses of metals and other materials.**Physics - Pressure**Pressure in solids, liquids and gases. Calculating pressure. | Oxford museums trip | **GCSE Biology introduction - cells and organisation**Organelles in cells, complexity of the body.**GCSE Chemistry introduction - atomic structure**Protons, neutrons and electrons**GCSE Physics introduction - energy**Energy stores, transfers and equations |  |