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 respiration  Factors 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 |  |