Subject: Y10 Triple Science

OVERVIEW

Students follow the AQA GCSE Science course and will gain a thorough grounding in each of the three sciences. Not only will they develop their knowledge and understanding of biology, chemistry and physics but they will enrich their experience by completing practical activities and learning through discovery. Students continue to build on the knowledge and understanding gained from Year 9, studying topics that build in complexity. Lessons include regular retrieval practice and past paper questions to build up recall and application skills. Students are taught by three specialist teachers, each taking 5 lessons a fortnight.

Aut

Biology

B1 cells

Transport in Cells, Osmosis Practical, Microbiology, Stem cells, Mitosis, Cancer

B2 Organisation

Digestive system, Enzymes, Practical, Circulatory System, Heart, Blood & Blood vessels, Respiratory

Chemistry

C1 Atomic Structure

Atomic Structure, development of atomic model, history of periodic table, group 1 elements, group 7 elements, transition elements

C2 Bonding

Ionic Bonding, Reactivity of Metals, Covalent Bonding, Metallic Bonding, Simple molecules, allotropes of

Physics

P1 Energy

Energy pathways & transfers, Energy calculations, Renewable & non-renewable energy sources, insulation investigation

P2 Electricity

Circuits & symbols, series & parallel circuits, resistance equation, resistance of a wire investigation

Assessment:

End of topic test for each unit.

Spr

Biology

B3 Infection

Pathogens, communicable Diseases, Viruses, Bacteria, Fungi and Protists, Immune Response, Vaccinations, Clinical Trials

Chemistry

C3 Quantitative Chemistry

Relative Formula Mass, Reacting Masses, Balancing equations, Atom Economy, Titrations

C4 Chemical Changes

Reactivity of metals, Reactions of acids, Displacement, forming salts, Electrolysis

Physics

P3 Particle Model

Particle model, density investigation, Change of state and internal energy, Latent heat, Gas pressure

Assessment:

End of topic test for each unit.

Sum

Biology

B4 Bioenergetics

Photosynthesis, Adaptations of a leaf, Respiration, Effects of exercise on the body

B7 Ecology

Communities, Adaptations, Cycling materials, Sampling populations, Biodiversity, Human impact on

Chemistry

C5 Energy Changes

Exothermic & endothermic reactions, energy change investigations, energy level diagrams, calculating bond energy, fuel cells

C6 Rates of Reaction

Rates, Effect of concentration, effect of surface area, effect of temperature, Catalysts

Physics

P4 Atomic Structure

Atomic Structure, History of the atom, Alpha, Beta and Gamma radiation, Half life, irradiation & contamination

Assessment:

End of Year exam will be 3 x Paper 1

End of topic test for each unit.

Useful resources for supporting your child at home:

- Knowledge retriever and workbook (provided)
- CGP Science Revision Guide
- BBC Bitesize revision pages
- Youtube: Cognito Science lessons

Homework:

Weekly exam question and Sparx quiz must be completed