Salford City Academy
The best in everyone™
Part of United Learning

Subject: Triple Science

Year 10

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 4 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 System, Adaptations of the lungs.

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 carbon, nanoparticles.

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, wiring a plug, National Grid, static.

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:

Mid-Year exam paper based on topics covered so far.

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 ecosystems.

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 Educake quiz must be completed.