

Single Science Award Syllabus (Higher Paper)

Biology - Life processes and Living Things

Cell Activity

- Animal and plant cells
- Cell division
- Diffusion, active uptake and osmosis

Humans as Organisms

- Nutrition
- Circulation
- Nervous system
- Hormones
- Homeostasis
- Disease
- Drugs

Variation, Inheritance and Evolution

- Variation
- Genetics
- Controlling Inheritance
- Evolution

Living Things and Their Environment

- Adaptation and Competition
- Human Impacts on the Environment

Bio Engineering

- Bacteria, Virus and Fungi
- Using Bacteria for Biotechnology

Chemistry – Materials and their Properties

Classification of Materials

- Atomic Structure

Changing of Materials

Useful Products from Mineral Ores

- Useful Products from Air
- Useful Products from Oil

Patterns of Behaviour

- Periodic Table
- Chemical Reactions
- Rate of Reactions
- Enzymes

Physics – Physical Processes

Electricity

- Potential Difference in Circuits
- Energy in Circuits
- Mains Electricity
- The Cost of Using Electrical Appliances

Waves

- Characteristics of Waves
- Electromagnetic Spectrum
- Sound and Ultrasound

The Earth and Beyond

- The Solar System
- The Universe

Energy Resources

- Non-Renewable and Renewable Resources

Energy Transfer

- Thermal Energy Transfer
- Efficiency
- Electromagnetic Induction

Radioactivity

- Types, Properties and Uses of Radioactivity
- Atomic Structure and Nuclear Fission