

# ROAD MAP OF The Science Curriculum

Engineer  
Researcher  
Educator  
Medical and veterinary Science  
Analyst  
Technician

**March Mocks: 3 papers**  
Biology paper 2,  
Chemistry paper 4,  
Physics paper 6

**Cycle 2: Science**  
Physics  
Energy, forces doing work, forces and their effects  
Particle model, forces and matter

**November Mocks: 3 papers**  
Biology paper 1,  
Chemistry paper 3,  
Physics paper 5

**Assessment of cycle 1 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

**Assessment of cycle 3 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

**Cycle 3: Science**  
Biology  
Health, disease and development of medicines  
Chemistry  
Acids and alkalis  
Physics  
Motion  
Forces

**Assessment of cycle 2 Science**  
• Blended assessment of cycle 2 topics using actual GCSE past paper questions

**Assessment of Physics cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 3: Physics**  
Energy stores and transfers and resources  
Motion  
Forces

**Assessment of cycle 2 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

How to use data in exam questions

**Cycle 1: Science**  
Biology  
Genetics  
Natural selection and genetic modification

**Cycle 2: Science**  
Biology  
Exchange and transport in animals  
Chemistry  
Ionic and covalent bonding and substances  
Physics  
Waves, light and the EM spectrum

How to make conclusions from tables and graphs of data

How to effectively revise independently

**Cycle 1: Biology**  
Cells - Transport  
Mitosis and stem cells  
Health, pathogens, disease and immune system  
Variation, inheritance and Meiosis  
Natural Selection and evolution

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

When and why we use specific apparatus and techniques

Techniques for decoding exam style questions

**Assessment of Chemistry cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

How to follow methods

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Revision

Revision

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Revision

Mathematical skills in Science

**Cycle 1: Science**  
Biology  
Animal coordination, control and homeostasis  
Chemistry  
Calculations involving masses  
Electrolysis, obtaining and using metals, reversible reactions and equilibria  
Physics  
Motion and forces

How to plan extended answers to 6 mark questions

How to evaluate methods and improve them

**Assessment of cycle 1 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

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Mathematical skills in Science

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

How to process data. How to analyse and interpret data

**Cycle 2: Chemistry**  
Reactivity of Groups 1, 7 and 0  
Rates of reaction and Reactions with Acids  
Ionic, Covalent and Metallic Bonding  
Exothermic and Endothermic Reactions  
Fuels and combustion

**Assessment of chemistry cycle 2**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 2: Chemistry**  
Introduction to the lab  
Particles and States of matter  
Separation Techniques  
Atoms and the periodic table  
Compounds and Chemical Reactions

How to behave and work safely in a science lab  
How to use a knowledge organiser for home learning

How to answer exam style questions

How to work safely with chemicals and apparatus

**Assessment of cycle 3 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

**Assessment of cycle 2 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

**Cycle 2:**  
Biology  
Plant structures and their functions  
Chemistry  
Groups in the Periodic table, Rates of Reaction, Heat and energy changes in reactions  
Physics  
Electricity and circuits

**Cycle 1: Science**  
Biology  
Ecosystems and material cycles  
Fundamental biological concepts  
Chemistry  
States of matter  
Separating and purifying substances  
Atomic structure  
Periodic table  
Physics  
Conservation of energy

**Assessment of Physics cycle 3**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 3: Physics**  
Electricity  
Waves - sound and EM spectrum  
Density  
Space

**Cycle 1: Biology (30 lesson)**  
Cell structure & division  
Plant, animal and bacterial cells, tissues and organs  
Specialised Cells  
Digestive system  
Reproduction, STIs and contraception

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 2: Chemistry**  
Introduction to the lab  
Particles and States of matter  
Separation Techniques  
Atoms and the periodic table  
Compounds and Chemical Reactions

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

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• Mid point multiple choice assessment  
• End of cycle exam style question assessment

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Atoms and the periodic table  
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• Mid point multiple choice assessment  
• End of cycle exam style question assessment

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• End of cycle exam style question assessment

**Assessment of Biology cycle 1**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 3: Science**  
Biology  
Cells and control  
Chemistry  
Fuels, Earth and Atmospheric Science  
Physics  
Magnetism, motor effect and electromagnetic induction

**Assessment of cycle 2 Science**  
• Blended assessment of cycle 3 topics using actual GCSE past paper questions

**Cycle 2:**  
Biology  
Plant structures and their functions  
Chemistry  
Groups in the Periodic table, Rates of Reaction, Heat and energy changes in reactions  
Physics  
Electricity and circuits

**Cycle 1: Science**  
Biology  
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Fundamental biological concepts  
Chemistry  
States of matter  
Separating and purifying substances  
Atomic structure  
Periodic table  
Physics  
Conservation of energy

**Assessment of Physics cycle 3**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

**Cycle 3: Physics**  
Electricity  
Waves - sound and EM spectrum  
Density  
Space

**Assessment of chemistry cycle 2**  
• Mid point multiple choice assessment  
• End of cycle exam style question assessment

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Cell structure & division  
Plant, animal and bacterial cells, tissues and organs  
Specialised Cells  
Digestive system  
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Important skills

Science at Isca allows all pupils to build on a set of observations, make informed decisions and be able to ask valid questions leading to a love for and understanding of themselves and the world around them.

