

SCIENCE CURRICULUM MAP

Key Concepts:
Kinetic and Potential
Work Done

Key Concepts:
Hydrocarbons
Refining

Key Concepts:
Reproductive Hormones
Genetic Engineering

Key Concepts:
Radioactive Decay
Half Life

Key Concepts:
Reaction Rate
Equilibrium

Key Concepts:
Evolutionary Theory
Classification

YEAR 11

Energy and work

Carbon chemistry

Controlling reproduction

Radioactivity

Controlling reactions

Evolution

Electromagnetic radiation

Human interaction

Atmosphere

Heating

Feedback and control

Making substances

Key Concepts:
Electromagnetism
Motor Effect

Key Concepts:
Electromagnetic Spectrum
Wave energy

Key Concepts:
Biodiversity
Communicable Disease

Key Concepts:
Earth's Atmosphere
Global Warming

Key Concepts:
Thermal Transfer
Specific and Latent
Pressure

Key Concepts:
Nervous System
Endocrine System
Enzymes

Key Concepts:
Making Salts
Amount of Substance

Key Concepts:
Metal Reactivity
Product Lifecycle

Key Concepts:
Genes
Monohybrid Inheritance

NB: Two separate pathways are available: GCSE Combined Science or Entry Level Certificate

Key Concepts:
Acceleration
Newton's 2nd Law
Momentum

Key Concepts:
Ionic, Covalent, Metallic
Electrolysis

Key Concepts:
Photosynthesis
Plant Transport

Key Concepts:
Electromagnetism
Motor Effect

YEAR 10

Newton's laws

Structure and bonding

Plants

Entry Level TDA 1

Using resources

Genetics

Key Concepts:
Atom Conservation
Reaction energy

Key Concepts:
Ohm's Law
Electrical Power
Energy Resources

Key Concepts:
Cell Transport
Cell Division

Key Concepts:
Circulatory Systems
System Damage
Immune System

Key Concepts:
Genes
Monohybrid Inheritance

Key Concepts:
Atom Conservation
Reaction energy

Key Concepts:
Ohm's Law
Electrical Power
Energy Resources

Key Concepts:
Cell Transport
Cell Division

Sound waves

Organ systems

Matter and energy

Home electricity

Growth and differentiation

Periodic table

Key Concepts:
Longitudinal and Transverse
Wave Model

Key Concepts:
Earth processes
Potable Water

Key Concepts:
Cellular Energy
Aerobic and Anaerobic

Key Concepts:
Electric charge
Voltage

Key Concepts:
Force Vectors
Force equilibrium

Key Concepts:
Weight
Gravitational Force
Solar System

Key Concepts:
Earth processes
Potable Water

Key Concepts:
Cellular Energy
Aerobic and Anaerobic

Key Concepts:
Electric charge
Voltage

Key Concepts:
Force Vectors
Force equilibrium

YEAR 9

Force and direction

Gravity

Life diversity

Reactants and products

Movement

Tissues and organs

Pure substances

Key Concepts:
Variation
Selective Breeding
Natural Selection

Key Concepts:
Sexual and Asexual
Menstrual Cycle
Embryo Development

Key Concepts:
Heat and Temperature
Energy
Wasted Energy

Key Concepts:
Speed
Motion Graphs

Key Concepts:
Feeding Relationships
Competition
Abiotic and Biotic

Key Concepts:
Reflection
Refraction

Key Concepts:
Chemical and Physical
pH scale
Neutralisation

Reproduction

Energy transfers

Interdependence

YEAR 8

Light

Changing Substances

Electric circuits

Cells

Substances and particles

Forces on materials

YEAR 7

Animals including humans

welcome KS2

YEAR 6

Living things and their habitats

Electricity

Light

Evolution and inheritance

KS4

At KS4, students study either the **AQA GCSE Combined Science: Synergy course (8465)** to gain a double award GCSE qualification or the **AQA Entry Level Certificate pathway (5960)** to obtain an Entry Level qualification. The GCSE course consists of four 2hr, 11 min (including extra time) terminal exams, whereas the Entry Level course is comprised of a portfolio of up to six Externally-set assignments, (short tests) and up to six Teacher-devised assignments, (short practical write-ups).

KS3

At KS3, pupils are introduced to the big ideas of science: forces, energy, matter, organisms and genes. Pupils also learn about working scientifically by developing an understanding of enquiry processes which are based on the skills of analysing, communicating, enquiring and solving.

Area	Forces		Energy			Matter			Organisms			Genes	
Big Idea	Forces predict motion	Fields produce forces	Energy is conserved	Electricity transfers energy	Radiation transfers energy	Structure determines properties	Reactions rearrange matter	Earth systems interact	Cells are alive	Bodies are systems	Organisms are independent	Characteristics are inherited	Species show variation