



Science KS3 Learning Journey

YEAR

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**GCSE
Circulation and
Health**

Blood and systems, non-communicable diseases and treatments.

**GCSE Earth's
Resources**

How chemists seek to minimise the use of limited resources such as energy and water, managing the environmental impact of human activity.

**GCSE Energy
Resources**

Energy usage and how it is affected by political, economic and scientific issues. Renewable and non-renewable energy sources and the advantages and disadvantages.



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Practical Skills

Understanding decimals, SI units, Graph drawing, calculating means, variables, range and resolution.

**Separating
Mixtures**

Applying different physical methods to separate different types of mixtures including an in depth look at the chemicals obtained from separating crude oil.

**Biological
Processes**

Photosynthesis, respiration, limiting factors, diffusion.

Sound, frequency, amplitude, how we hear, light, colour, reflection and refraction.

**Acids and
Metals**

Acids and alkalis: how we identify them, how they react and the patterns they show.

The Earth

How science and geography combine, how rocks and the atmosphere develop.

Forces

Types of forces, weight, mass, friction, resultant forces, how planes fly, magnets and making electromagnets.

Waves

Keeping a balanced diet, health impacts, the digestive system, and enzymes.

**Chemical
Reactions**

Different types of reactions and how we write them as equations.

**DNA and
Evolution**

Genetics, inheritance, mutations, natural selection, evolution, evidence and fossils.

Reproduction

Pollination, fertilisation, seed dispersal, female and male human reproduction.

Nutrition

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**Particles and
Matter**

What is everything made of and how it behaves. How dissolving works.

**Elements,
Compounds and
Mixtures**

Materials and the periodic table, element symbols. How we separate mixtures

**Energy and
Electricity**

Types of energy stores and how its transferred. Making electrical circuits, light bulbs and lighthouse challenge.

**Temperature
and Energy**

How to use a thermometer, state changes, expansion, heat, conduction, convection and radiation.

**Interdependence
and Variation**

Organism interactions, and human impacts, genetics introduction.

**Cells and
Organisation**

Animals and plants, cells and organisms, viewing structures and functions.

**Working Like a
Scientist**

Working safely, using a Bunsen, choosing variables, drawing graphs, completing experiments

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