

Looking at the structure of compounds and how they are held together by ionic and covalent bonds.

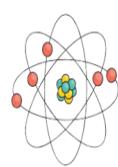
Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning.

Link to Mathematics – Drawing graphs, analysing and processing data

Bonding structure and the particle model



Atomic structure

# Science-KS3



INSPIRE  
BELIEVE  
ACHIEVE

**Key**  
Good character values  
Cross curricular links  
Assessment points  
Subject specific skills  
CEIAG careers  
Underlined Deeper development of earlier skills / knowledge

The product of combustions

and their environmental

impacts

Resilience, perseverance and

collaboration

QMF-Extended writing mini

essay, QMS-End of topic test

Evaluating, describing,

analysing, explaining, planning.

Link to geography- how human

actions

impact the environment

Exploring the environment

Types of energy and a look at the future use of resources in generating electricity.

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining,..

Link to Mathematics – processing data and drawing graphs



Generating our own energy

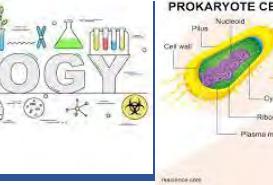
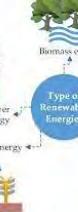
The biology underpinning the next steps towards GCSE

Resilience, perseverance and collaboration

QMF-assessed practical skills, QMS-End of topic test

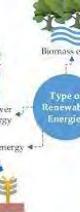
Evaluating, describing, analysing, explaining, planning.

Link to Mathematics – Ideas of scales, accurate measurements and rearranging formulae



Fundamental biology

Living together



Living together

How to identify when chemical reaction occur and name the products of reactions

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, explaining

Link to Mathematics – processing data and drawing graphs

9

How energy is transferred by waves, the differences between longitudinal and transverse waves.

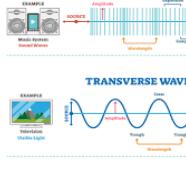
Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning.

Link to Music – different types of sound and their sound waves

Waves at work



Who is eating who and a look at the different ecosystems which exist on our planet.

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning.

Link to geography – the importance of maintaining biodiversity



Unravelling the universe

An anatomical look at the key organs involved in reproduction. How this fits into a cycle of developing life.

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining,

Link to RE – ethical consideration of using genetic technologies

Creating connections



Healthy humans

Looking at basic chemical reactions such as neutralisation. How to identify that a reaction has occurred by temperature change or formation of a gas.

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, planning.

Link to Mathematics – processing data and drawing graphs



Real reactions



Science in action

8

Basic structure and

function of sub cellular

organelles. An

introduction to using

microscopes to

investigate an unseen

world

Resilience,

perseverance and

collaboration

QMF-assessed practical

skills, QMS-End of topic

test

Evaluating, describing,

analysing, explaining,

Link to PE – the

movement of the body

(muscular skeletal

systems) and

maintaining a healthy

body. Link to

Mathematics –

processing data and

drawing graphs

Being human

Atoms as basic building blocks to compounds and their organisation in the periodic table

Resilience, perseverance and collaboration

QMF-assessed practical skills, QMS-End of topic

test

Evaluating, describing, analysing, explaining

Mathematics – processing data and drawing

graphs



Magnetism



Fundamental forces



Fundamental forces



Fundamental forces



Fundamental forces



Fundamental

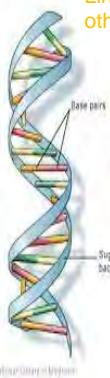
Understanding why we are the way we are, factors we inherit and the influence of our environment.

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining

Link to RE – discussing the ethical consideration of using genetic screening and other genetic technologies.



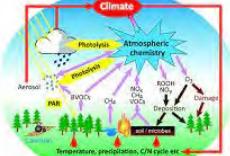
## B2- Inheritance, variations and evolution



## P2-Waves

Evolution of the earth's atmosphere since the beginning of the planet  
Resilience, perseverance and collaboration  
QMF-Extended writing mini essay, QMS-End of topic test  
Evaluating, describing, analysing, explaining  
Link to geography – burning fossil fuels and global warming

## C2-Chemistry of the atmosphere



Properties of alkanes and alkenes, how to obtain them and utilise them in polymers

Resilience, perseverance and collaboration

QMF-assessed practical skills, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to Mathematics – Drawing graphs, analysing and processing data, rearranging formulae

## C2-Organic chemistry and analysis

The interaction of magnets and their properties, the creation of an electromagnet and investigating the factors which affect this

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to Mathematics – Drawing graphs, analysing and processing data, rearranging formulae

## P2-Magnetism and electromagnetism



Deeper look into newton's laws of motion and the forces that govern our existence. Calculating real life problems such impact in an accident or the elastic properties of materials.

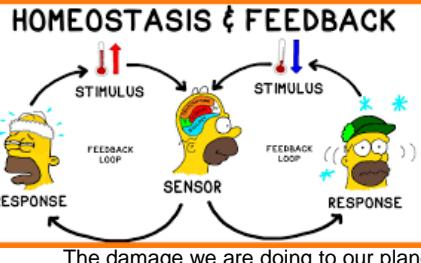
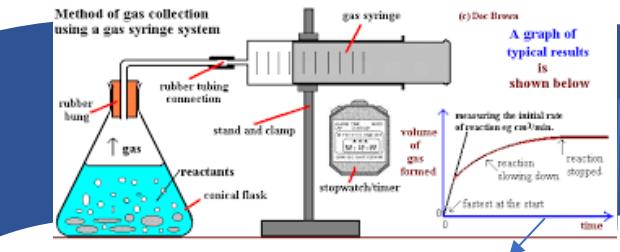
Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to Mathematics – Drawing graphs, analysing and processing data, rearranging formulae

## P2-Forces



Maintaining the balance in the human body using the nervous system and the endocrine system

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to PE – Nerves and reaction times

## B2- Homeostasis and response

The damage we are doing to our planet in various ways and how this will eventually effect us

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to geography – how human impact effect the environment and the importance of maintaining biodiversity



11

A study of the causes of communicable and non-communicable diseases, and the response of the immune system to pathogens

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining,

Link to history – the roles of different scientists and doctors in the development of antibiotic and vaccinations.

Link to PE – how lifestyle choices are risk factors for coronary heart disease.

## C2-Energy changes and rate of reaction

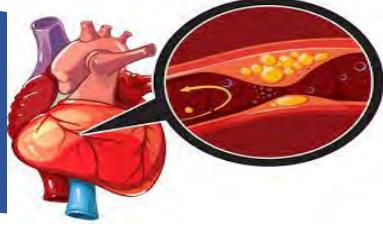
Factors effecting the rate of a chemical reaction such as concentration, temperature and pressure and how to measure them

Resilience, perseverance and collaboration

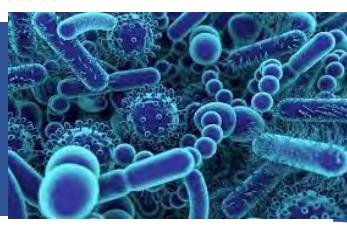
QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning

Link to Mathematics – Drawing graphs, analysing and processing data



## B1-Infection and response



Investigating the organ systems in the human body such as respiratory and circulatory systems

QMF-Extended writing mini essay, QMS-End of topic test

Resilience, perseverance and collaboration

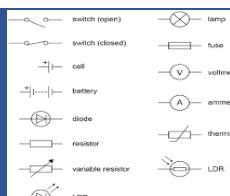
Evaluating, describing, analysing, explaining, planning

Link to PE – the anatomy and structure of the heart and lungs

## B1-Organisation



## P1-Electricity



Learning how circuits are built using various components and looking at how the components interact with electricity, using electrical calculations.

Resilience, perseverance and collaboration

QMF-assessed practical skills, QMS-End of topic test

Evaluating, describing, analysing, explaining

Link to Mathematics – Drawing graphs, analysing and processing data, rearranging formulae

## P1-Energy



The dynamics of a chemical reaction such as yield and equilibrium

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining,

Link to Mathematics - Analysing and processing data

## C1-Quantitative chemistry



## C1-Chemical changes

10

Topic examines the indicators of a chemical reaction and the products of common chemical reactions such as acids and metals

Resilience, perseverance and collaboration

QMF-Extended writing mini essay, QMS-End of topic test

Evaluating, describing, analysing, explaining, planning