

Separate Science Curriculum- Learning Journey 2022-2023



Spring Term 2

Summer Term 1

Retrieval revision

Retrieval revision



Spring Term 1

Autumn Term 2

Autumn Term 1

Ecosystems & Material Cycles - How are materials recycled on our planet?
Qualitative Analysis- How do forensic scientists identify substances?
Electromagnetism - How does movement generate electricity?

Exchange and transport in animals – How does the heart pump blood?
Organic Chemistry - How do we make useful products from crude oil?
Forces & matter - How do materials behave, and why?

Animal control, coordination and homeostasis -How can we treat diabetes?
Rates of Reaction – Why do compounds react the way that they do?
Static Electricity- What causes shocks and how can this be used?

YEAR
11

GCSE

During the school year 2022/2023- expect some variation to this in Y9-Y11

Spring Term 2

Summer Term 1

Summer Term 2

Human Health, Disease and the Development of Medicine – How do vaccines work?
Electrolysis - How can we produce future fuels?
Astronomy- How does space change over time?

Plant Structure and Function – Why is water important to plants?
Obtaining Metals and Equilibria - How do we obtain, pure metals and maximise yield?
Forces and work - What is the link between work and power?

Animal control, coordination and homeostasis – Why are hormones important??
Groups of the Periodic Table - Why do elements and react the way they do?
Earth and Atmosphere - Where did our atmosphere come from & what do we need to do to prevent climate change?
Electricity - What happens in an electrical circuit?

YEAR
10

GCSE

Spring Term 1

Autumn Term 2

Autumn Term 1

Natural Selection and Genetic Modification – Why do offspring look like their parents?
Acids, Alkalis and Mixtures_- How do acids and alkalis help our modern world?
Radioactivity – How do we know what atoms consist of, do they ever change and how do we use their power?

Genetics- What is DNA?
Mass Calculations - What makes the chemical industry economically viable?
Motion and Forces – How do forces affect the motion of objects?

Cells and Control – How do organisms grow and repair cells?
Atomic Structure, Bonding and Types of Substance - How is our universe held together?
Waves and Electromagnetic Spectrum - What are the wonders of the EM Spectrum?

Spring Term 2

Summer Term 1

Summer Term 2

Enzymes and transport - What are "biological catalysts"?
The History of the Atom and The Periodic Table - What are we all made of?
Motion - How can we measure, calculate and record movement?

Ecology – What do organisms compete for?
pH and Neutralisation – What is the pH scale and how can it be applied in medicine?
Forces – How are forces involved in all things including both movement and staying still?

YEAR
9

Spring Term 1

Autumn Term 2

Autumn Term 1

Cells and microscopes - How has the electron microscope changed our understanding of cells?

Purifying Substances - How does separating mixtures help us to solve crimes and provide clean water?

Energy - Where does energy go?

Plant Growth – What factors need to be considered when farming?
Reactivity - Why are some reactions faster than others?
Forcefields and electromagnets - How does magnetism link to electricity?

Genetics and evolution- What is Darwin's theory of evolution?
Polymers and Recycling Materials - How can making and using materials cause problems?
Earth and space - Where is everything in space?

Spring Term 2

Summer Term 1

Summer Term 2

Cellular respiration- Where do we get energy from?
Reactions of metals - What are the key properties of metals?
Energy transfers - What effect does energy have on objects and on people?

Unicellular organisms- Are all microbes bad?
Rocks - How has our Earth changed?
Motion - How can we record and analyse the motion of objects?

YEAR
8

Spring Term 1

Autumn Term 2

Autumn Term 1

Plant reproduction- What are flowers for?
The Periodic Table - What is everything made of?
Fluids - How do particles affect objects in liquids and gases?

Food and Diet- What is a healthy diet?
Combustion - How do you create and extinguish fires?
Light - How does light behave in different situations?

11
10
9
8
7

Spring Term 2

Summer Term 1

Summer Term 2

Muscles and Skeletons - What is the role of muscles in the body?
Solids, Liquids and Gases - What is the particle model?
Forces – What effect can forces have?

Ecosystem -How are organisms adapted to their habitats?
Atoms and Elements - What is the chemical make up of air?
Sound – What is sound and what can it do?

YEAR
7

Spring Term 1

Autumn Term 2

Autumn Term 1

Animal Reproduction- How do animals reproduce?
Acids and Alkalis -What is the difference between acids and alkalis?
Current electricity -How does electricity behave in different types of circuit?

Cells- What makes an organism?
Mixtures- How can we separate different substances?
Energy- Why is energy essential to life?

