



YEAR 9 SCIENCE

LEARNING JOURNEY

Support. Believe. Achieve.



AUTUMN TERM

START

1



INTRODUCTION TO SCIENCE

- What is science?
- Scientific enquiries
- Safety in the lab
- Science in everyday life

GCSE Link: Nature of Science
Careers Link: All careers in science and technology

2



PARTICLE AND STATE CHANGE

- Particle model
- Changes of state
- Diffusion
- Density

GCSE Link: States of Matter
Careers Link: Chemical Engineer, Materials Scientist, Meteorologist

3



CELLS

- Animal and plant cells
- Specialised cells
- Microscopy
- Cell structures

GCSE Link: Cell Biology
Careers Link: Doctor, Nurse, Veterinarian, Biomedical Scientist

4



CELL SYSTEMS

- Digestive system
- Circulatory system
- Respiratory system
- Maintaining health

GCSE Link: Organisation
Careers Link: Doctor, Physiotherapist, Sports Therapist, Paramedic

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ATOMS AND THE PERIODIC TABLE

- Elements and symbols
- Atomic structure
- The periodic table
- Trends in the periodic table

GCSE Link: Atomic Structure and the Periodic Table
Careers Link: Chemist, Materials Scientist, Research Scientist

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CHEMICAL CHANGES

- Reactivity series
- Acid and alkali
- pH and indicators
- Chemical reactions

GCSE Link: Chemical Reactions
Careers Link: Chemist, Chemical Engineer, Pharmacist

7



FORCES AND MOTION

- Contact forces
- Non-contact forces
- Speed and velocity
- Newton's laws

GCSE Link: Forces and Motion
Careers Link: Engineer, Pilot, Sports Scientist

8



USEFUL CHEMICAL REACTIONS

- Metals and acids
- Neutralisation
- Electrolysis
- Making salts

GCSE Link: Chemical Reactions
Careers Link: Chemist, Process Engineer, Environmental Scientist

SUMMER TERM

9

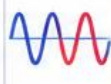


ENERGY

- Energy stores
- Energy transfers
- Efficiency
- Renewable energy

GCSE Link: Energy
Careers Link: Energy Engineer, Environmental Scientist, Architect

10



WAVES, SOUND AND LIGHT

- Wave properties
- Sound and hearing
- Light and the eye
- Reflection and refraction

GCSE Link: Waves (Sound and Light)
Careers Link: Audiologist, Physicist, Optician, Acoustician

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ELECTRICITY AND MAGNETISM

- Electric circuits
- Current and voltage
- Electromagnets
- Magnetic fields

GCSE Link: Electricity and Magnetism
Careers Link: Electrician, Engineer, Physicist, Technician

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FERTILISATION

- The reproductive system
- Fertilisation
- Pregnancy
- Development

GCSE Link: Reproduction
Careers Link: Midwife, Doctor, Fertility Scientist, Health Visitor

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VARIATION AND NATURAL SELECTION

- Variation
- Inheritance
- Evolution
- Natural selection

GCSE Link: Biology – Evolution and Inheritance
Careers Link: Geneticist, Ecologist, Zoologist, Conservationist

READY FOR GCSE!



KEY SKILLS DEVELOPED THROUGHOUT YEAR 9



Practical Investigation



Data Analysis



Problem Solving



Scientific Communication



Scientific Literacy



Critical Thinking

LOOKING AHEAD

By the end of Year 9, students will have developed the knowledge and skills needed to succeed in GCSE Science and be prepared to explore more complex ideas in Biology, Chemistry and Physics.