Science Subject Overview

ROUTE 1 - SCIENCE

Year 7 & Year 8

Skills and Knowledge Progression

KNOWLEDGE

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Pupils formulate their own questions about the natural world.
- Teachers use precise questioning in class to test conceptual knowledge through the national curriculum.

SKILLS

- Simple questions
- Simple tests
- Observe changes over time
- Identify and classify
- Observe changes and patterns
- Research using secondary sources

SPIRAL

- Pupils in these groups struggle to retain any information and work at a much slower pace. They therefore repeat the topics, extending their knowledge each time, until they are embedded. Access to the next level of work is also very limited but will be used with those who are able.
- We build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2

Year 7	**Animals Including Humans** *Discover different animals have different body parts (some have no legs, some have lots). Understand we need to eat food to be healthy.* **Seasons** *Discover the season of autumn.*	**Materials** *Discover how materials can change, such as ice melting, transparency of some materials, magnetism and floating and sinking.* **Seasons** *Discover the season of winter.*	**Shadows** *Discover how light changes and how shadows are formed.* **Seasons** *Discover the season of spring.*	**Plants and trees** *Discover how animals use and help plants. Make a bird feeder and a bug hotel.*	**Seasons** *Discover the season of summer.* **Observational activities** *Explore and observe different activities.*	**Lifecycles** *Understand the life cycles of a butterfly.*
Year 8	**Animals Including Humans** *Discover different animals have different body parts (some have no legs, some have lots). Understand we need to eat food to be healthy.* **Seasons** *Discover the season of autumn.*	**Materials** *Discover how materials can change, such as ice melting, transparency of some materials, magnetism and floating and sinking.* **Seasons** *Discover the season of winter.*	**Shadows** *Discover how light changes and how shadows are formed.* **Seasons** *Discover the season of spring.*	**Plants and trees** *Discover how animals use and help plants. Make a bird feeder and a bug hotel.*	**Seasons** *Discover the season of summer.* **Observational activities** *Explore and observe different activities.*	**Lifecycles** *Understand the life cycles of a butterfly.*

Year 9, Year 10 and Year 11
Skills and Knowledge Progression

KNOWLEDGE

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Pupils formulate their own questions about the natural world.
- Teachers use precise questioning in class to test conceptual knowledge through the national curriculum.

SKILLS

- Fair testing with support
- Identify and classify
- Observe changes over time
- Observe changes and patterns
- Simple testing with support

SPIRAL

- Pupils in these groups struggle to retain any information and work at a much slower pace. They therefore repeat the topics, extending their knowledge each time, until they are embedded. Access to the next level of work is also very limited but will be used with those who are able.
- We build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 9	**Our place in space** *Sensory exploration of night and day activities and understanding our planet.*	**Materials** *Sensory exploration of materials and their uses.*	**Recognising plant parts by touch** *Discover the parts of a plant by touching them and give 5 things they need.*	**Shadows** *Discover shadows of different objects. Make some shadow puppets.*	**Sensory introduction to Chemistry in our world.** *Discover how water pours and tips. Taste chocolate in different forms.*	**Animals including humans** *Discover the body parts of a human and some animals.*

Year 10	**Our place in space** *Identify the sun, explore night and day and understand our planet.*	**Materials** *Explore different materials and their uses. Understand the vocabulary needed to describe different materials.*	**Recognising plant parts by touch** *Explore the parts of a plant by touching and looking at them and give 5 things they need.*	**Shadows** *Explore shadows of different objects and how they are formed. Make some shadow puppets.*	**Sensory introduction to Chemistry in our world.** *Explore how water pours and tips. Taste chocolate in different forms. Experience the different effects of water.*	**Animals including humans** *Explore the body parts of a human and some animals. Understand what they are needed for.*
Year 11	**Our place in space** *Identify the sun from an image, explore the seasons and understand our planet.*	**Materials** *Explore different materials and their uses. Use the vocabulary needed to describe different materials.*	**Recognising plant parts by touch** *Describe the parts of a plant by touching and looking at them and give 5 things they need.*	**Shadows** *Explore shadows of different objects and how they are formed. Make some shadow puppets.*	**Sensory introduction to Chemistry in our world.** *Experience how water pours and tips. Taste chocolate in different forms. Experience the different effects of water.*	**Animals including humans** *Explore the body parts of a human and some animals. Describe the job of each part.*

Curriculum Overview

- Route 1 Pupils undertake tasks to DISCOVER, EXPLORE and EXPERIENCE themes and opportunities within the context of the topics.
- Pupils are taught content and skills in line with National Curriculum coverage at appropriate levels.
- Pupils study elements of Biology, Chemistry and Physics during each year and study each topic over a term.
- Delivery is supported with PZAZ Science.
- Pupils experience both conceptual and practical learning.
- Pupils have the opportunity to engage in science related off-site activities.
- Science topics endeavour to align with current Topic teaching.
- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.

Cross-Curricular Links

- Route 1 Science, English opportunities to address; Spoken English. Spoken Language. Reading-Word Reading. Reading-Comprehension. Writing-Transcription. Writing-Composition. Writing-VGP.
- Route 1 Science, Maths opportunities to address; Number-Place Value. Number-Addition Subtraction. Number-Multiplication and Division. Number-Fractions. Measurement. Geometry-Shape. Geometry-Position Direction. Statistics. Ratio. Algebra. Probability.
- Route 1 Science, E-safety opportunities to address; Privacy and Security. Managing Online Information.
- Route 1 Science, Geography, weather. Analysing and collecting data. Identification of human features.

Destinations

- Pupils will continue in education and possibly access Entry Level qualifications.

ROUTE 2 – SCIENCE

Year 7 & Year 8

Skills and Knowledge Progression

KNOWLEDGE

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Pupils formulate their own questions about the natural world.
- Teachers use precise questioning in class to test conceptual knowledge through the national curriculum.

SKILLS

- Asking questions
- Making predictions
- Setting up tests
- Observing and measuring
- Recording data
- Interpreting and communicating results
- Evaluating

SPIRAL

- We build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2

Year 7	**STEM Activity** *Introduction to secondary science.* **Animals including humans** *Name common groups of animals and group animals, name and locate parts of the human body, describe the basic needs of animals for survival and group animals according to what they eat.*	**Animals including humans** *Classify different animals and know how to take care of animals, including a description of their basic needs.*	**Seasonal changes** *Describe changes across the four seasons*	**STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**Everyday materials** *Distinguish objects from materials, describe their properties, identify and group everyday materials*	**Plants** *Know how to describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants.*

Year 8	**Animals including humans** *Name common groups of animals and group animals, name and locate parts of the human body, describe the basic needs of animals for survival and group animals according to what they eat*	**Animals including humans** *Name common groups of animals and group animals, name and locate parts of the human body, describe the basic needs of animals for survival and group animals according to what they eat* **Seasonal changes** *Describe changes across the four seasons*	**Everyday materials** *Distinguish objects from materials, describe their properties, identify and group everyday materials*	**STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**Plants** *Know how to describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants.*	**Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat*

Year 9, Year 10 and Year 11

Skills and Knowledge Progression

KNOWLEDGE

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Pupils formulate their own questions about the natural world.
- Teachers use precise questioning in class to test conceptual knowledge through the national curriculum.

SKILLS

- asking questions
- making predictions
- setting up tests
- observing and measuring
- recording data
- interpreting and communicating results
- Evaluating

SPIRAL

- We build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 9	**ROUTE B** **STEM Activity** *Introduction to upper school science.* **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.* **Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat.*	**ROUTE B** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE B** **Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat* **Use of everyday materials** *Looking at the best materials for building in different situations. Explore the properties of each material.*	**ROUTE B** **Plants** *Describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants* **Living things and their habitats** *Describe differences in the life cycles of a mammal*

	ROUTE A **STEM Activity** *Introduction to upper school science.* **WJEC – Renewable Energy – EL3** *Describe sources of energy and how we use them. Identify things that use energy.*	**ROUTE A** **WJEC – Renewable Energy – EL3** *Describe sources of energy and how we use them. Identify things that use energy..*	**ROUTE A** **WJEC – Renewable Energy – EL3** *Describe sources of energy and how we use them. Identify things that use energy.* **Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat.*	**ROUTE A** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE A** **Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat* **Use of everyday materials** *Looking at the best materials for building in different situations. Explore the properties of each material.*	**ROUTE A** **Plants** *Describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants* **Living things and their habitats** *Describe differences in the life cycles of a mammal*

Year 10	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **Living things and their habitats** *Describe differences in the life cycles of a mammal* **Animals including humans** *Name common groups of animals and group animals, name and locate parts of the human body, describe the basic needs of animals for survival and group animals according to what they eat*	**ROUTE B** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE B** **Animals including humans** *Name common groups of animals and group animals, name and locate parts of the human body, describe the basic needs of animals for survival and group animals according to what they eat* **Plants** *Describe the different parts of plants and explore what plants need to grow.*	**ROUTE B** **Forces** *Show an awareness of the force of gravity* **Light** *Understand light is needed to see.* **Rocks** *Exploring the three main types of rocks – igneous, sedimentary and metamorphic and understanding how each of these are formed.*

	ROUTE A **WJEC – Renewable Energy – EL3** *Describe sources of energy and how we use them. Identify things that use energy.*	**ROUTE A** **WJEC – Renewable Energy – EL3** *Describe sources of energy and how we use them. Identify things that use energy.*	**ROUTE A** **Animals including Humans** *Describe the simple functions of the digestive system and construct food chains.* **Living things and their habitats** *Understand how to classify living things.* **Forces** *Show an awareness of the force of gravity Identify the forces of air resistance and water resistance. Understand how levers and pulley work.*	**ROUTE A** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE A** **Electricity** *Identify common appliances that run on electricity, construct simple circuits and recognise open and closed switches.* **Sound** *Describe how sounds are different, using keywords pitch, volume and understand how sound travels.* **Forces** *Understand how levers and pulley work.* **Space** *Identify the different planets in the solar system and understand how the moon and Earth orbit each other.* **Living things and their habitats** *Understand the human life cycle and how plants and animals reproduce.*	**ROUTE A** **Living things and their habitats** *Understand the human life cycle and how plants and animals reproduce* **Properties and Changes of materials** *Describe and be able to separate, filter and sieve different materials, understanding the properties of these.* **States of matter** *Compare and group materials based on the state.*

Year 11	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **WJEC – Renewable Energy – EL2** *Identify sources of energy and how we use them. Identify things that use energy.*	**ROUTE B** **Forces** *Show an awareness of the force of gravity* **Animals including Humans** *Describe the simple functions of the digestive system and construct food chains.*	**ROUTE B** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE B** **Living things and their habitats** *Understand how to classify living things.* **Sound** *Describe how sounds are different, using keywords pitch, volume and understand how sound travels.*	**ROUTE B** **Electricity** *Identify common appliances that run on electricity, construct simple circuits and recognise open and closed switches.* **States of matter** *Compare and group materials based on the state.*
	ROUTE A **Choices and decisions** *Understand how what we do changes the outcome.* **Electricity** *Identify common appliances that run on electricity, construct simple circuits and recognise open and closed switches.* **Animals including Humans** *Describe the simple functions of the digestive system and construct food chains.*	**ROUTE A** **Living things and their habitats** *Understand how to classify living things.* **Sound** *Describe how sounds are different, using keywords pitch, volume and understand how sound travels.*	**ROUTE A** **States of matter** *Compare and group materials based on the state.*	**ROUTE A** **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**ROUTE A** **Forces** *Show an awareness of the force of gravity Identify the forces of air resistance and water resistance. Understand how levers and pulley work.* **STEM project**	**ROUTE A** **STEM project**

Curriculum Overview

- Route 2 Pupils undertake tasks to ENHANCE, DEVELOP and DEEPEN themes and opportunities within the context of the topics.
- Pupils are taught content and skills in line with National Curriculum coverage at appropriate levels.
- Pupils study elements of Biology, Chemistry and Physics during each year and study each topic over a term.
- Delivery is supported with PZAZ Science.
- Pupils experience both conceptual and practical learning.
- Pupils have the opportunity to engage in science related off-site activities.
- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.

Cross-Curricular Links

- Route 2 Science, English opportunities to address; Spoken English. Spoken Language. Reading-Word Reading. Reading-Comprehension. Writing-Transcription. Writing-Composition. Writing-VGP.
- Route 2 Science, Maths opportunities to address; Number-Place Value. Number-Addition Subtraction. Number-Multiplication and Division. Number-Fractions. Measurement. Geometry-Shape. Geometry-Position Direction. Statistics. Ratio. Algebra. Probability.
- Route 2 Science, E-safety opportunities to address; Privacy and Security. Managing Online Information.
- Route 2 Science, Geography where plants grow and locations around the world. Analysing and collecting data. Where rocks are formed – climate. Environment. Natural resources.
- Route 2 Science, Life skills; Electricity and safety around the home.

Destinations

- Route 2 pupils will complete EL2/3 qualifications and then continue to Foundation or Independent living courses at college.

ROUTE 3 - SCIENCE

Year 7 & Year 8

Skills and Knowledge Progression

KNOWLEDGE

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Pupils formulate their own questions about the natural world.
- Teachers use precise questioning in class to test conceptual knowledge through the national curriculum.

SKILLS

- Systematic and careful observations over time, looking at similarities and differences.
- Questions surrounding patterns I have found in data.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- Set up simple practical enquiries, comparative and fair tests
- Use secondary sources with adult support to help clarify results seen.

SPIRAL

- We build upon the learning and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the theme of the lesson.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 7	**Introduction to Secondary Science** Let's work as a team on a project **Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat*	**Animals including humans** *Locate body parts, know what is needed for survival and basic human needs and group animals based on what they eat*	**Plants** *Describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants*	**STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**Use of everyday materials** *Looking at the best materials for building in different situations. Explore the properties of each material.*	**Use of everyday materials** *Looking at the best materials for building in different situations. Explore the properties of each material.* **Living things and their habitats** *Describe differences in the life cycles of a mammal*

Year 8	**Animals including humans** *Know how to describe the changes as humans develop to old age* **Rocks** *Exploring the three main types of rocks – igneous, sedimentary and metamorphic and understanding how each of these are formed.*	**Rocks** *Exploring the three main types of rocks – igneous, sedimentary and metamorphic and understanding how each of these are formed.*	**Forces** *Show an awareness of the force of gravity*	**STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**Light** *Understand light is needed to see, know light is reflected and shadows.* **Plants** *Describe the different parts of plants and explore what plants need to grow.*	**Plants** *Describe the different parts of plants and explore what plants need to grow.*

Year 9, Year 10 and Year 11

Skills and Knowledge Progression

KNOWLEDGE

- Biology Unit 1 - The Human Body – Circulatory and other systems, vaccinations, keeping our body healthy.
- Chemistry Unit 3 - Elements, Mixtures and Compounds - States of matter, atoms, elements and compounds, alloys and metals.
- Physics Unit 5 – Energy, forces and the structure of matter – Energy resources, types of force, reaction times and radioactivity
- Physics Unit 6 – Electricity, magnetism and waves - Understand how electricity is used and calculated, how magnets work and the EM spectrum

SKILLS

- Recognise things change over time, and can ask pertinent questions and suggest reasons for similarities and differences over time
- Ask questions surrounding patterns I have found in data as to why something I have observed has happened.
- Develop and use keys and other information to classify and describe objects in ways to help answer questions
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Use secondary sources to help interpret results seen.

SPIRAL

- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 9	**Introduction to Upper School Science** Let's work as a team on a project **AQA ENTRY LEVEL – Physics Unit 6 – Electricity, magnetism and waves** *Embed how electricity is used and calculated, how magnets work and the EM spectrum*	**AQA ENTRY LEVEL – Physics Unit 6 – Electricity, magnetism and waves** *Embed how electricity is used and calculated, how magnets work and the EM spectrum*	**AQA ENTRY LEVEL – Biology Unit 1 – The Human Body** *Circulatory and other systems, vaccinations, keeping our body healthy.*	**AQA ENTRY LEVEL – Biology Unit 1 – The Human Body** *Circulatory and other systems, vaccinations, keeping our body healthy.* **STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**AQA ENTRY LEVEL – Biology Unit 1 – The Human Body** *Circulatory and other systems, vaccinations, keeping our body healthy.*	**Unit 2 and Unit 6 – Preparation for GCSE** *Revisit work and extend further to GCSE*

Year 10	**WJEC EL3 Renewable Energy** *Understand how our energy usage has changed over time and how our energy is produced.*	**WJEC EL3 Renewable Energy** *Understand how our energy usage has changed over time and how our energy is produced*	**Animals including Humans** *Describe the simple functions of the digestive system and construct food chains.* **Living things and their habitats**	**STEM work** *Working scientifically in a group to use the skills we have been learning.* **Science week**	**Electricity** *Identify common appliances that run on electricity, construct simple circuits and recognise open and closed switches.* **Sound** *Understand how frequency and pitch changes.*	**States of matter** *Compare and group materials based on the state.*
Year 11	**AQA ENTRY LEVEL – Physics Unit 5 – Energy, forces and the Structure of Matter** *Describe energy transfers, forces and speed.* **Choices and Decision** *Realise how our decisions affect what happens in life.* **Health and Safety** *Discuss how Health and Safety is implemented in science, demonstrating your skills in this area.*	**AQA ENTRY LEVEL – Biology Unit 2 – Environment, Evolution and Inheritance.** *Describe evolution, how fossils are formed, how animals survive, including food webs and chains.* **Health and Safety** *Discuss how Health and Safety is implemented in science, demonstrating your skills in this area.*	**GCSE candidates – Revision and revisiting of difficult topics.** *Pupil's will have the chance to relook at topics that have been difficult.* **Forces** *Show an awareness of the force of gravity*	**GCSE candidates – Revision and revisiting of difficult topics.** *Pupil's will have the chance to relook at topics that have been difficult.* **Light** *Understand light is needed to see, know light is reflected and shadows.* **Science week**	**GCSE Preparation**	

Curriculum Overview

- Route 3 Pupils undertake tasks to EMBED, DEMONSTRATE and APPLY knowledge and understanding through themes and opportunities within the context of the topics.
- Pupils develop and enhance skills taught in Years 7,8, and 9.
- Pupils experience both conceptual and practical learning.
- Pupils have the opportunity to engage in science related off-site activities.
- Pupils study the topics on a cycle to give a broad and balanced curriculum.

Cross-Curricular Links

- Route 3 Science, English opportunities to address; Spoken English. Spoken Language. Reading-Word Reading. Reading-Comprehension. Writing-Transcription. Writing-Composition. Writing-VGP.
- Route 3 Science, Maths opportunities to address; Number-Place Value. Number-Addition Subtraction. Number-Multiplication and Division. Number-Fractions. Measurement. Geometry-Shape. Geometry-Position Direction. Statistics. Ratio. Algebra. Probability.
- Route 2 Science, E-safety opportunities to address; Privacy and Security. Managing Online Information.
- Route 2 Science, Geography where plants grow and locations around the world. Analysing and collecting data. Where rocks are formed – climate. Environment. Natural resources.
- Route 2 Science, Life skills; Electricity and safety around the home.
- Route 2 Science, Computing; Uses of digital technology.
- Route 2 Science; D of E; Outside environment and health and safety.

Destinations

- AQA Entry Level Science
- AQA GCSE Science Synergy
- Possible Level 1 courses at college