Science at West SILC

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Overview

A high-quality science education provides the foundation for understanding the world through the core disciplines of Biology, Chemistry, and Physics. At West SILC, we recognise that science has profoundly impacted our lives and is essential to the world's future prosperity. Therefore, all learners have the right to be taught key aspects of scientific knowledge, methods, processes, and applications at a level appropriate to their understanding.

By developing a body of foundational knowledge and concepts, learners will recognise the power of rational explanation and foster a sense of excitement and curiosity about natural phenomena. Through science, they will learn to explain occurrences, predict how things behave, thin kcritically, and analyse cause and effect, gaining a deeper understanding of the world around them.

Subject Intent

At West SILC, our science curriculum is designed to ignite and nurture every learner's natural curiosity and enthusiasm for discovering the world around them. We treat each learner as an individual, tailoring our approach to meet their specific needs, learning styles, and developmental levels. Our aim is to create an inclusive and engaging environment where scientific thinking flourishes and learners feel empowered to ask questions, explore ideas, and investigate their surroundings.

We provide meaningful, first-hand and real-life experiences that promote engagement, deepen understanding, and make science relevant. Through these experiences, learners build a foundation of scientific knowledge in a way that is accessible, appropriate, and challenging. Our curriculum enables all learners to develop core concepts across Biology, Chemistry, Physics, and Working Scientifically, progressing from their own starting points.

We are committed to:

- Building on learners' natural curiosity and fostering a love for exploration and discovery.
- Developing essential scientific skills through hands-on, practical learning and enquiry-based activities.
- Teaching scientific knowledge and vocabulary at a level that is matched to individual learner profiles.
- Encouraging learners to communicate their observations, ideas, and findings using appropriate scientific language and methods.
- Supporting learners to evaluate their results and draw conclusions with growing independence and confidence.

Above all, our science curriculum at West SILC seeks to develop confident, self-aware learners who can think critically, work collaboratively, and contribute meaningfully to their own learning and future.

Implementation by pathway

Explore pathway

Science is delivered through the ‘Understanding the World’ area of learning. Learners explore their environment through sensory-rich, play-based experiences that support curiosity and discovery. Learning is embedded in daily routines and the natural world, allowing children to develop foundational scientific understanding in a meaningful context.

Carefully planned science opportunities are embedded within the continuous provision areas both indoors and outdoors. These areas are designed to promote questioning, exploration, and early investigation. Water play introduces concepts like floating and sinking, capacity, and cause and effect. Sand and construction areas allow children to explore materials, properties, and structures. Mini-beast hunts, planting, and weather observations help develop early biology and environmental awareness.

Adults play a crucial role in extending learning by modelling scientific language, guiding interactions, and scaffolding thinking. They support learners to observe, question, and describe changes, such as melting, growing, or mixing. These experiences help children begin to make predictions and understand simple processes and patterns in the world around them.

All scientific learning is highly exploratory and child-led, responding to learners’ interests and developmental stages. Through a balance of adult-led provocations and spontaneous discovery, learners in Explore begin to develop the scientific skills of observing, exploring, comparing, and reflecting in an age-appropriate and meaningful way.

Explore pathway

Cycle year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	**Me and my small world - Animals including humans** Explore the natural world around them.		**What's in my basket? - Fruit and vegetables** Talk about the differences between materials and changes they notice.		**Senses - Sight, touch, sound, smell and taste.** Explore the natural world around them.	
2	**Let's go outside - The natural world around them** Explore the natural world around them. Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them.		**What's changed? - Explore simple changes** Talk about the differences between materials and changes they notice.		**Night and day - Nocturnal animals** *Reception – White Rose Science* Understand the effect of changing seasons on the natural world around them.	
3	**Changes in Winter - Seasonal changes in winter.** **Watch it grow - Seasonal changes in Spring, Such as plants, flowers and animals growing.** Understand the effect of changing seasons on the natural world around them. Explore the natural world around them. Understand the effect of changing seasons on the natural world around them.		**Let it flow - Floating and sinking** Talk about the differences between materials and changes they notice.		**From desert to jungle - Contrasting habitats** **From city to sea - Different environments** Recognise some environments that are different from the one in which they live.	
4	**Animal detectives - Explore animals and their simple features** Recognise some environments that are different from the one in which they live.		**Pushes and pulls - Explore simple forces** **Test it out - suitability for a particular purpose** Describe what they see, hear and feel whilst outside. Explore the natural world around them.		**Look all around - seasonal changes in Summer.** Describe what they see, hear and feel whilst outside. Explore the natural world around them. Understand the effect of changing seasons on the natural world around them.	
5	**Happy and Healthy – Healthy foods & staying active** Know and talk about the different factors that support their overall health and wellbeing.		**Our wonderful world – Looking after the world.** Begin to understand the need to respect and care for the natural environment and all living things.		**We're going on an animal hunt - Features of animals and the similarities and differences between them.** Explore the natural world around them. Describe what they see, hear and feel whilst outside.	

Engage Pathway

Learners follow a pre-subject specific, sensory curriculum. Science concepts are introduced through immersive, multisensory experiences involving light, sound, touch, and movement. Learning is non-linear and focuses on building anticipation, engagement, and communication through routine and repetition. learners engage with real-life stimuli and adult-facilitated exploration, assessed using the Engagement Model.

Aspire Pathway

Learners do not study science as a discrete subject. Instead, science concepts are introduced through sensory exploration, real-life experiences, and structured play. The curriculum is highly personalised and non-subject specific, with a focus on engagement, interaction, and communication.

Learning is facilitated through carefully designed environments that support sensory regulation and minimise anxiety. Science learning is embedded within routine-based activities and continuous provision areas—both indoors and outdoors—where learners can explore cause and effect, observe change, and interact with natural materials. Activities such as water play, planting, sensory walks, and cooking offer rich scientific opportunities adapted to individual needs.

Adults play a crucial role in modelling language, supporting communication, and following the child's lead to personalise learning. Tasks are repetitive and structured to support predictability and reduce cognitive load, allowing learners to build confidence and understanding in a safe and consistent environment. The focus remains on developing foundational skills such as curiosity, attention, and tolerance of new experiences, rather than teaching discrete scientific knowledge or content.


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Connect Pathway

Learners study Biology, Chemistry, and Physics through a semi-formal curriculum with adapted content and delivery. Scientific enquiry is embedded through practical activities focusing on observation, pattern seeking, fair testing, and classification. Teachers differentiate tasks and support communication using visuals, symbols, and structured language. Real-life application and repeated practice support retention and concept development. In addition to structured classroom teaching, some primary learners also receive one of their weekly science sessions through Attention Time. This strategy is used because it is highly motivating and engaging for learners with a range of communication and attention needs. The structured yet visually stimulating format supports curiosity, predictability, and focus—key components in developing early scientific enquiry. Attention Time sessions offer opportunities for learners to observe exciting demonstrations, anticipate changes, and interact with materials in a way that promotes engagement and scientific thinking, particularly for those who may not respond as well to more traditional formats of instruction.

Connect Pathway- Primary Long Term Plan

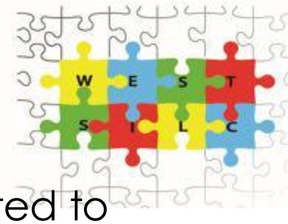
Connect Pathway Primary Science Key Stage 2

Cycle year	Autumn 1		Autumn 2		Spring 1	Spring 2		Summer 1		Summer 2
1	Autumn – Seasonal changes + Weather	**Animal bodies** Body parts (including private and public) and basic needs	**Light and Shadow** Natural sources of light, day and night, shadows	Winter – Seasonal changes + Weather	**Grouping and classifying materials Part 1 – Solids & Liquids** Properties & changes of materials Properties of solids and liquids, sorting and classifying	**Plants and Seasonal Changes** Parts of a plant, plant lifecycle seed dispersal Seasonal changes for autumn and winter	Spring – Seasonal changes + Weather	**Magnets & Magnetism** Attract and repel, testing out materials, magnetic games and uses	Summer – Seasonal changes + Weather	**Grouping and changing materials** Sort and explore materials, compare natural and manmade materials
2		**Variation and classification** Living things can be sorted and classified based on characteristics	**Sound and hearing** How sounds are made, locate sounds in their environment, changing sounds		**Characteristics of materials** Explore different materials, their properties and how they can be used in everyday life	**Living things in their environments – Habitats** Explore variety of habitats, learn how plants and animals are specially adapted to survive in their habitat		**Earth and Beyond** Day and night, seasons, moon phases, planets in the solar system		**Grouping and classifying materials Part 2** Heating and cooling, reversible and irreversible changes, evaporation and condensation
3		**Living things in the local environment** Explore animals including insects in environment, lifecycle of animals (butterflies, humans)	**Digestive system** Inc. teeth, energy and diet		**Characteristics of materials** Investigate different materials, their uses and how to test them fairly. Observe and record outcomes (e.g., best material for a Bag for Life)	**Senses** Including Humans Understanding the 5 senses and how we use them to explore the world		**Pushes & Pulls** Investigate how pushing, pulling and spinning can make objects move in different ways.		**Grouping and classifying materials Part 3** Separating mixtures, filtering, evaporation
4		**Living things and their environment – food chains** Predators, prey, food chains, movement of energy, herbivore, carnivore, omnivore	**Forces and motion** Friction, air resistance, water resistance		**Grouping and changing materials** Experiment with melting, freezing, stretching and mixing to see how materials change	**Plants and Seasonal *Changes* –** Plant needs, making food and Seasonal changes for spring and summer		**Electricity** Explore how electricity powers the world around us, switches, batteries, electricity safety, simple electrical circuits		**Rocks and Soils** Explore how rocks and soils feel, look and behave. Investigate how soil is made up of different materials, rocks can be used for different purposes, fossils

Connect Pathway
Secondary Long Term Plan

Cycle year	Autumn 1		Autumn 2		Spring 1	Spring 2		Summer 1		Summer 2
1	Autumn – Seasonal changes + Weather	**Animal bodies including humans** Body parts including private and public, muscles, skeletons and joints	**Forces and Motion – Magnets** How magnets work and how forces can push and pull objects, attract and repel, magnetic	Winter – Seasonal changes + Weather	**Digestive System** Food's journey through the body, looking after our digestive system	**Materials and their properties** Solids, liquids and gases	Spring – Seasonal changes + Weather	**Plants** Seasonal changes in spring and summer	Summer – Seasonal changes + Weather	**Light and Shadow** How shadows form, how light travels, mirrors and periscopes
2		**Nutrition and diet** Importance of exercise and healthy living	**Sound** Sources of sound, loud/quiet; high/low; vibrations and sound waves		**Variation and classification** Classifying living things in different ways	**Chemical reactions** Atoms, elements and compounds		**Reproduction** Human anatomy, development in the womb, life stages and Puberty		**Solar system and space** Earth's orbit and rotation
3		**Diet, drugs and lifestyle** How the body fights disease	**Electricity** How to make simple circuits; powering appliances, safety		**Living things and their environments** Habitats, adaptations and environmental changes	**Materials and their properties** Heating and cooling, melting points		**Forces and Motion** Friction		**Sustainable and renewable energy** Energy sources, types of renewable and non-renewable energy, pros and cons of each, build a wind turbine
4		**Basic functions of heart and lungs** Parts of each, their functions, how to keep them healthy	**Earth and beyond –** Seasonal changes, weather, day/night; moon's movement		**Plants** Explore what plants need to grow, seasonal changes – Autumn and Winter	**Materials and their properties** Rocks and fossils		**Reproduction** Animal life cycles, non mammals, flog/butterfly life cycle		**Forces and motion** Air and water resistance
5		**Living things and their environments** Food chains, food waste, herbivore, carnivore, omnivore	**Light** Explore how light interacts with different materials – reflection, transparent, translucent and opaque Light pollution		**Inheritance** Explore inherited similarities, variation within the same species	**Materials and their properties** Reversible and irreversible changes		**Chemistry skills** Filtration, separation techniques, saturation, dissolving		**Sustainability and global warming** Deforestation and plastic pollution

Climb pathway



Learners access timetabled Science lessons each week, based on the National Curriculum and carefully adapted to meet their individual needs and learning styles. Lessons follow a structured format and are designed to develop core scientific knowledge, vocabulary, and enquiry skills in a purposeful and engaging way.

The curriculum covers key scientific domains including Biology, Chemistry, and Physics, with units planned to ensure progression in knowledge and skills across each Key Stage. Scientific content is delivered using a range of accessible methods, such as visual aids, hands-on activities, clear modelling, and supported discussion. Concepts are broken down and revisited regularly to support retention and understanding.

Learners engage in practical investigations to explore cause and effect, test hypotheses, observe patterns, and draw simple conclusions. They are taught how to use basic scientific equipment safely and accurately, record their observations using charts, drawings, or structured writing, and reflect on outcomes. Opportunities are provided for learners to work both independently and collaboratively to apply their learning.

Key scientific vocabulary is explicitly taught and reinforced, and learners are supported to express their findings verbally, through writing, or using symbols or ICT, depending on their communication needs. Lessons are closely aligned with EHCP outcomes where appropriate, supporting not only academic progress but also communication, problem-solving, and independent thinking.

This approach ensures that learners access a rich Science curriculum that builds scientific understanding, fosters curiosity, and equips them with key skills for further learning and everyday life.

Climb Pathway- Primary Long Term Plan

Climb Pathway Primary Science

Cycle year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	**Animal bodies** KS2 Equals: Animals Including Humans WR 2.1.1 Body parts (including private and public) and basic needs	**Light and Shadow** KS2 Equals: Light WR 3.2.3 Natural sources of light, day and night, shadows	**Grouping and classifying materials Part 1 – Solids & Liquids** KS2 Equals: Properties & changes of materials Properties of solids and liquids, sorting and classifying	**Plants and Seasonal Changes –** KS2 Equals: plants WR 1.1.2, 1.1.4, 1.3.1 Parts of a plant, plant lifecycle seed dispersal Seasonal changes for autumn and winter	**Magnets & Magnetism** KS2 Equals: Forces and Motion WR 3.3.3 Attract and repel, testing out materials, magnetic games and uses	**Grouping and changing materials** KS2 Equals: Everyday materials WR 1.1.3 Sort and explore materials, compare natural and manmade materials
2	**Variation and classification** KS2 Equals: Animals WR 1.2.2 Including Humans Living things can be sorted and classified based on characteristics	**Sound and hearing** KS2 Equals: Sound How sounds are made, locate sounds in their environment, changing sounds	**Characteristics of materials** KS2 Equals: Everyday materials Explore different materials, their properties and how they can be used in everyday life	**Living things in their environments – Habitats** KS2 Equals: Animals including humans WR 2.2.2 Explore variety of habitats, learn how plants and animals are specially adapted to survive in their habitat	**Earth and Beyond** KS2 Equals: Earth & Space Day and night, seasons, moon phases, planets in the solar system	**Grouping and classifying materials Part 2** KS2 Equals: Properties & changes of materials Heating and cooling, reversible and irreversible changes, evaporation and condensation
3	**Living things in the local environment** KS2 Equals: Animals including humans WR 2.3.2 Explore animals including insects in environment, lifecycle of animals (butterflies, humans)	**Digestive system** KS2 Equals WR 2.1.2, 3.1.3 Inc. teeth, energy and diet	**Characteristics of materials** KS2 Equals: Everyday materials Investigate different materials, their uses and how to test them fairly. Observe and record outcomes (e.g., best material for a Bag for Life)	**Senses** KS2 Equals: Animals WR 1.1.1 Including Humans Understanding the 5 senses and how we use them to explore the world	**Pushes & Pulls** KS2 Equals: Forces and Motion WR R 2.5 Investigate how pushing, pulling and spinning can make objects move in different ways.	**Grouping and classifying materials Part 3** - KS2 Equals: Properties & changes of materials Separating mixtures, filtering, evaporation
4	**Living things and their environment – food chains** KS2 Equals: Animals including humans WR Predators, prey, food chains, movement of energy, herbivore, carnivore, omnivore	**Forces and motion** KS2 Equals: Forces & Motion WR 3.3.2 Friction, air resistance, water resistance	**Grouping and changing materials** KS2 Equals: Everyday materials WR 1.1.3 Experiment with melting, freezing, stretching and mixing to see how materials change	**Plants and Seasonal *Changes* –** KS2 Equals: plants WR 1.2.4, 1.3.4, 2.3.1 Plant needs, making food and Seasonal changes for spring and summer	**Electricity** KS2 Equals: Electricity Explore how electricity powers the world around us, switches, batteries, electricity safety, simple electrical circuits	**Rocks and Soils** KS2 Equals: Rocks WR 3.1.5, 3.2.2, 3.2.1 Explore how rocks and soils feel, look and behave. Investigate how soil is made up of different materials, rocks can be used for different purposes, fossils

Climb Pathway Secondary Long Term Plan

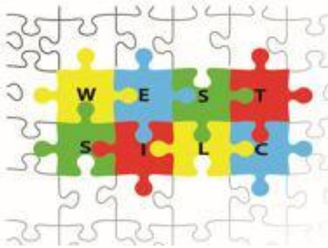
Cycle year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	**Animal bodies including humans** Body parts including private and public, muscles, skeletons and joints	**Forces and Motion Magnets** How magnets work and how forces can push and pull objects, attract and repel-magnetic	**Digestive system**	**Materials and their properties** Solids Liquids and Gases – AQA 3.3.2 How structure affects properties (outcome 3 and 4)	**Plants** Seasonal changes in Spring and summer	**Light and Shadow**
2	**Nutrition and Diet-** Importance of exercise and healthy living AQA 3.1.2 – how the body works (outcome 4)	**Sound** Sources of sound, loud quite, high and low, vibrations and sound waves.	**Variation and classification** Classifying living things in different ways	**Chemical reactions** AQA 3.3.1 atoms, elements and compounds (outcome 1 & 2)	**Reproduction** Human anatomy	**Solar system and Space** Earth's orbit and rotation
3	**Diet, drugs and lifestyle** AQA 3.1.3 how the body fights disease (outcomes 5-7)	**Electricity** How to make simple circuits, powering appliances and safety	**Living things and their environments** Habitats, adaptations and environmental changes	**Materials and their properties** heating and cooling, melting points AQA 3.3.5 – polymers (outcome 10)	**Forces and motion** Friction AQA 3.5.3 speed and stopping distances (outcome 6-8)	**Sustainable and renewable energy** AQA 3.5.1 Energy transfers and resources (outcome 3 & 4)
4	**Basic functions of heart and lungs** AQA 3.1.1 what is the body made of (outcome 1-3)	**Earth and beyond** Seasonal changes, weather, day and night, moons movement	**Plants** Explore what plants need to grow. Seasonal changes Autumn and Winter	**Materials and their properties** Rocks and fossils. AQA 3.3.4 Metals and alloys (outcome 7-9)	**Reproduction** AQA 3.1.4 how the body is co-ordinated (outcome 8-10)	**Forces and motion** Air and water resistance
5	**Living things and their environments** Food chains, food waste, herbivore, carnivore and omnivore	**Light** Explore how light interacts with different materials, reflection, transparent, translucent, opaque and light pollution	**Inheritance** Explore inherited similarities, variation within the same species	**Materials and their properties** Reversible and irreversible changes	**Chemistry skills** Filtration, separation techniques, saturation, dissolving	**Sustainability and global warming** Deforestation and plastic pollution AQA 3.5.4 – atoms and nuclear radiation (outcome 10)

Elevate pathway

Learners have a minimum of 5 Science lessons per fortnight. From Year 7, all learners have access to labs and specialist equipment allowing them the opportunity to conduct experiments and engage with demonstrations and dissections. Science lessons cover Physics, Chemistry and Biology.

In KS4, learners have the opportunity to complete an Entry Level in Science and where appropriate, some learners will access double award GCSE. Based on options choices, there is also the potential for learners to access an Entry Level in Practical Horticulture Skills. Throughout Key Stages 3 and 4, learners contribute to the maintenance of the school garden, growing and selling vegetables, planting and producing Christmas wreaths.

Elevate pathway



	Autumn 1		Autumn 2	Spring 1		Spring 2	Summer 1		Summer 2
7	Chemistry Skills	Plants and Ecosystems	Energy	Separation Techniques	Forces	Atoms, Elements, Compounds	Pressure	Acids and Alkalis	Reproduction
8	Heating and Cooling	Planet Earth	Cells to Organisms	Light	The Periodic Table	Gas Exchange	Sound	Chemical reactions	Digestive system
9	Machines	Metals and Reactions	Bioenergetics	Electricity	Bonding	Inheritance and Evolution	Space	Intro to Entry Level	Intro to Entry Level
10	Entry Level B1	Entry Level B1	Entry Level B1	Entry Level C3	Entry Level C3	Entry Level P5	Entry Level P5	Entry Level B2	Entry Level B2
11	Entry Level C4	Entry Level C4	Entry Level P6	Entry Level P6	Entry Level coursework	GCSE	GCSE	GCSE	Transition

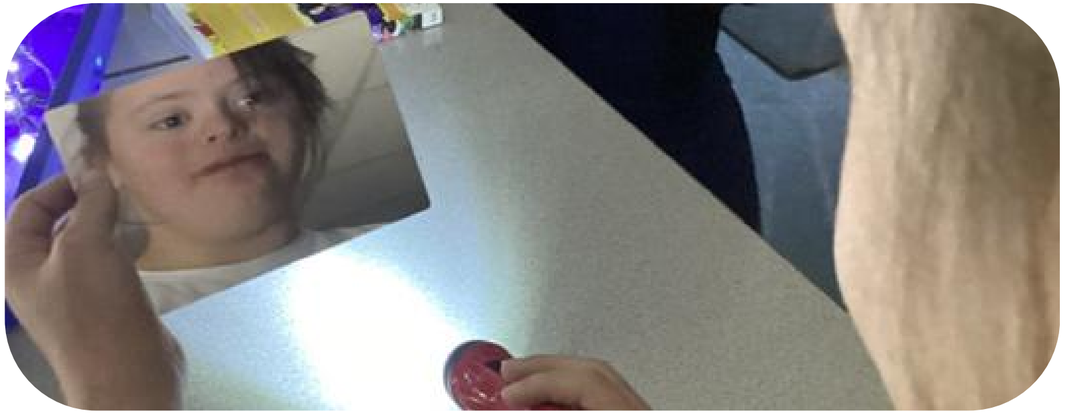
WAIP

At Key Stage 3, Science is taught using a STEM (Science, Technology, Engineering and Mathematics) approach. It aims to bridge the learning gap by placing learners at the core of experience by encouraging active learning. Student study topics such as Rockets, ‘Zombie Apocalypse’, Microbes, ‘Desert Island and The Solar System. Learners are challenged to design, carry out and record experiments to test their ideas and concepts. Teaching methods encourage use of scientific questioning, enquiry and application of scientific vocabulary.

West AIP Long Term Plan

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Science	Y7	**Solar System** Planets, Seasons, Satellites, Date & Time Create solar system	**States of Matter** Liquids, Solids and Gases Separating techniques, chromatography, filtration and evaporation	**Living Things** Life cycles Life processes Classification keys Habitats & Environments	**Microbes Microorganisms -** Bacteria, Infections, Yeast	**Forces** Air resistance, Water resistance, Gravity, Friction Speed, Distance & Time. Mass & Weight	**Desert Island Survival** Water Filter pH testing Home-made compass - Magnets Rope strength and design Streamline and buoyancy
STEM	Y8 Y9	**Rockets: Space Race** Thrust, Fuel, Propulsion. Recording results, Angles and trajectory.	**Making Matter:** Using states of matter to make new creations.	**Musculoskeletal System** Muscles, Bones, Dissection, Ligaments, Tendons	**Electricity** Creating circuits	**Forces** Parachute and egg drop -size of parachutes -different protective layers -speed & breakages	
Year 10		**Space Physics** Planets, Seasons, Satellites, Composition of the Earth, Gravity, magnetism, electromagnetism, atmosphere, **Forces and rockets:** Space Race, Thrust, Fuel, Propulsion. Recording results, Speed and trajectory	**States of Matter and separation** Liquids, Solids and Gases Separating techniques, chromatography, filtration and evaporation Atoms	**Classification and Eco systems** Life cycles- reproduction Life processes – respiration/ photosynthesis Classification keys Habitats & Environments	**Microbes Microorganisms - Bacteria, Infections, Yeast**	**Forces and Motion** Air resistance, Water resistance, Energy, pressure, Friction Speed, Distance & Time. Mass & Weight **Electricity** Creating circuits	**Human Biology (Musculoskeletal and digestive Systems)** Muscles, Bones, Dissection, Ligaments, Tendons
Year 11		Students to complete ASDAN Science short course award 1 session per week. To work through the 6 modules at their own pace depending on placement start date – Modules to be completed are- Human machine, Forces and motion, Chemical change, Biological challenges, Space physics and Performance in sport					

Impact



At West SILC, the impact of our science curriculum is seen in the holistic development of our learners. Through a rich, inclusive, and carefully adapted curriculum, learners are empowered to explore, question, and understand the world around them—developing both essential scientific knowledge and transferable life skills.

- **Enthusiasm and Engagement in Science**

Learners develop a genuine enthusiasm for science through stimulating, hands-on experiences and real-world contexts. Engaging lessons across Biology, Chemistry, and Physics spark curiosity and encourage learners to ask questions, investigate, and appreciate the relevance of science in everyday life. Enrichment opportunities—such as themed science days, visits from STEM professionals, and trips like the Planetarium—further deepen learners' enjoyment and inspire a lifelong interest in scientific discovery.

- **Resilience, Independence, and Curiosity**

Practical investigation and problem-solving activities promote resilience, independence, and curiosity. learners learn that scientific enquiry often involves trial and error and are encouraged to embrace challenge as part of the learning process. They reflect on their methods, adapt their approaches, and become increasingly confident in asking questions and exploring new concepts independently.

- **Development of Scientific Skills and Critical Thinking**

Learners acquire and apply key scientific skills—including observing, predicting, experimenting, and evaluating—to explore the world around them. These skills are embedded through practical work and enquiry, fostering a deeper understanding of how science connects to real-life situations. In doing so, learners develop their ability to think critically, reason logically, and make informed decisions—skills that extend far beyond the science classroom.

Impact

- **Cross-Curricular Learning and Application**

Through the integration of other core and foundation subjects, learners experience science as a dynamic and connected discipline. They apply scientific thinking across subjects—whether using mathematical reasoning in data analysis, creating art through scientific observation, or exploring the science behind technology. These interdisciplinary links, combined with life skills and Preparation for Adulthood learning, ensure that science remains meaningful and applicable to everyday tasks, including time management, problem-solving, and financial decision-making.

- **Preparation for Future Learning and Careers**

Our curriculum equips learners with the foundational knowledge, curiosity, and transferable skills needed to succeed in future education, training, or employment. Whether pursuing formal qualifications or vocational pathways, learners develop an understanding of how science underpins careers in fields such as healthcare, engineering, environmental science, and technology. They leave with the confidence to take their learning further and the awareness of the opportunities that scientific knowledge can unlock.

- **Collaboration and Communication Skills**

Science at West SILC fosters effective communication and collaboration. Learners are encouraged to share ideas, present findings, and use scientific language to articulate their understanding. Group investigations and discussions promote teamwork, active listening, and respectful dialogue, while also developing the independence to explain and justify their thinking. These essential communication skills support not only academic success but also personal development and future employability.

Assessment

Assessment in science is adapted to suit the needs and curriculum pathways of each learner. While science is not assessed as a discrete subject for all learners, progress is tracked through a combination of holistic and formal systems tailored to each pathway.

Across all pathways, learners' individual progress in science-related learning is often evidenced through their EHCP targets, First Steps (West SILC's bespoke framework based on Birth to 5 Matters), and the Characteristics of Effective Learning. These tools capture the development of scientific skills, curiosity, and understanding through meaningful and developmentally appropriate experiences.

For Post-16 learners, science-related understanding may be captured through engagement in ASDAN qualifications, where applicable.

- Connect and Climb Pathways: learners' progress in science is tracked using Evidence for Learing (EfL) and Arbor. Learners also work towards accredited outcomes including the Entry Level Certificate in Science, the CREST Award (where appropriate), and GCSE Science. Assessment focuses on practical skills, enquiry, and understanding of scientific concepts in real-life contexts.
- Elevate Pathway: Priesthorpe Partnership learners are assessed using the mainstream school's tracking system. These learners work towards a range of qualifications, including Entry Level, CREST Award, and GCSE Science.
- AIP: learners attending the AIP are supported by West SILC staff but remain on the roll of their home mainstream schools. Teachers report progress in science directly to the home schools. Where applicable, learners continue to work towards science accreditations including GCSEs, ensuring continuity and achievement in line with their home school curriculum.

This integrated approach to assessment ensures that scientific understanding is captured meaningfully across the school, reflecting each learner's unique learning journey and potential.

For further information please contact Vicky Duce or Joy Jackson, Science Cooridantors