Curriculum intent (overview) – To deepen students' skills and knowledge through a broad and balanced curriculum which prepares students for adulthood.

11V - Venture Curriculum – *Science 6 Lessons Weekly*

Year	2025 – 2026 Autumn 1	2025– 2026 Autumn 2	2025 – 2026 Spring 1	2025– 2026 Spring 2	2025– 2026 Summer 1	2025 – 2026 Summer 2
	Topic: B9 – Creepy Crawlies B11 – My Genes **Suggested Key Questions:** What is an invertebrate and how is it different from a vertebrate? What are some examples of creepy crawlies we can find around us? How do invertebrates move, eat, and protect themselves? Where do creepy crawlies live and why? How do we group or classify different invertebrates? Why are creepy crawlies important in nature? What are genes and what do they do? What features do we inherit from our parents? How are we similar to and different from other people? What is variation and why is it important?	**Topic:** C11 How Fast? How Slow? C12 CSI Plus **Suggested Key Questions:** What is a chemical reaction and how can we tell it's happening? What does it mean when a reaction is fast or slow? What things can change how fast a reaction happens? How does temperature affect the speed of a reaction? How does the size of pieces or surface area affect reaction speed? Why is it important to control reaction speed in real life? What is forensic science and how is it used to solve crimes? What types of evidence can be found at a crime scene? How can we test unknown substances to find out what they are?	**Topic:** P9 –Pushes and Pulls P10 – Driving Along **Suggested Key Questions:** What is a force and how can we describe it? What happens when we push or pull an object? How do different surfaces affect how things move? What is friction and how does it help or stop movement? How can we measure how strong a force is? Where do we see pushes and pulls in everyday life? What is speed and how do we measure it? What happens when something speeds up or slows down? How can we measure how far something travels? What is the difference between fast and slow movement?	**Topic:** **Understanding Cells** – Unit Code: **113709** *Basic structure and function of cells.* **Reproduction in Humans** – Unit Code: **113710** *Covers human reproductive systems and processes.* **Variation and Inheritance** – Unit Code: **113711** *Explores genetic traits and differences in organisms.* **Suggested Key Questions:** What are cells and why are they important? How do different parts of a cell help it do its job? What are the parts of the human reproductive system and what do they do? How does a baby develop from fertilisation to birth?	**Topic:** **States of Matter** – Unit Code: **113712** *Solids, liquids, gases and their properties.* **Acids and Alkalis** – Unit Code: **113713** *Simple reactions and pH testing.* **Materials and Their Uses** – Unit Code: **113714** *Properties and everyday applications of materials.* **Suggested Key Questions:** What are the differences between solids, liquids, and gases? How and why do materials change from one state to another? What are acids and alkalis, and how can we test them? What happens when an acid and an alkali are mixed?	**Topic:** **Forces and Motion** – Unit Code: **113715** *Pushes, pulls, and how things move.* **Light and Sound** – Unit Code: **113716** *Basic properties and uses of light and sound.* **Electricity and Energy** – Unit Code: **113717** *Simple circuits and energy sources.* **Suggested Key Questions:** What are forces and how do they act on objects? How do forces change the way things move? How does light help us see? What is sound and how does it travel? What do we need to make a circuit work? Where does energy come from and how do we use it?

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	How do animals and plants pass on traits to their offspring? What makes each living thing unique? 🛠️ Key Skills **Key Skills and Knowledge:** Identifying and naming common invertebrates (e.g. worms, insects, spiders, snails). Sorting animals into groups based on features (e.g. legs, wings, body parts). Observing invertebrates in their habitats (e.g. school garden, bug hotel). Recording findings using tally charts, drawings, or simple tables. Describing how invertebrates are adapted to their environments. Explaining the role of invertebrates in food chains and ecosystems. Identifying inherited traits (e.g. eye colour, hair type) and learned behaviours. Comparing similarities and differences between individuals. Sorting traits into inherited and	What is chromatography and how does it help identify substances? How do scientists match fingerprints or fibres to people or places? Why is it important to record and handle evidence carefully? **Key Skills and Knowledge:** Observing and describing fast and slow reactions (e.g. fizzing, colour change). Measuring time taken for a reaction using a stopwatch or timer. Changing one variable at a time (e.g. temperature, concentration, surface area). Recording results in a table and identifying patterns. Comparing reaction speeds using simple graphs or bar charts. Explaining how reaction speed is important in cooking, medicine, or industry. Carrying out simple chemical tests (e.g. for acids, alkalis, or gases). Using chromatography to separate colours in inks or dyes.	How do we show movement using graphs or pictures? What affects how fast something moves? **Key Skills and Knowledge:** Identifying forces as pushes or pulls in real-life situations. Using simple equipment (e.g. spring scales) to measure force. Investigating how surfaces affect movement (e.g. smooth vs. rough). Predicting and testing how objects move when pushed or pulled. Recording results from force experiments using charts or photos. Explaining how friction works using practical examples (e.g. shoes on different floors). Measuring distance and time using simple tools (e.g. tape measure, stopwatch). Calculating speed using the formula: Speed=DistanceTimeSpeed=TimeDistance Comparing speeds of different objects or people.	What makes us who we are—our genes or our environment? Why is it good that we are all different? **Key Skills and Knowledge:** Identify the basic parts of plant and animal cells and understand that all living things are made of cells. Describe the functions of key cell parts and compare plant and animal cells. Identify the main organs in the male and female reproductive systems and describe their functions. Understand the process of fertilisation and the basic stages of pregnancy and birth. Distinguish between inherited and environmental traits in humans and other organisms. Understand how variation occurs and why it is important for survival.	What are materials made of and what are their properties? Why do we use different materials for different jobs? **Key Skills and Knowledge:** Identify the properties of solids, liquids, and gases. Describe how materials change state through heating and cooling. Recognise common acids and alkalis and understand how to test their pH. Understand how acids and alkalis react with each other (neutralisation). Identify different materials and describe their properties. Understand how the properties of materials make them suitable for specific uses.	**Key Skills and Knowledge:** Identify different types of forces such as pushes, pulls, and friction. Describe how forces affect the movement and speed of objects. Understand how light travels and how we see things. Understand how sound is made and how it travels. Identify components of a simple electrical circuit and understand how they work. Recognise different sources of energy and how they are used.

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	environmental categories. Using simple family trees or diagrams to show inheritance. Exploring variation in a group (e.g. measuring hand spans, height, eye colour). Recording and presenting data using bar charts or pictograms.	Observing and comparing fingerprints or fibres using magnifiers or photos. Recording evidence clearly using tables, drawings, or photos. Following instructions carefully to carry out fair tests. Explaining how science helps solve real-life problems like crimes or mysteries.	Drawing simple distance-time graphs to show movement. Describing motion using words like "faster," "slower," "stopped." Carrying out fair tests to explore how weight, surface, or slope affects speed.			
Links to Gatsby Benchmarks:	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Students to consider what skills are required to be a paramedic, doctor, nurse, vet that leads onto looking at what skills are needed for different roles they are interested in and what qualifications.	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 4 – Linking Curriculum to learning Benchmark 8 – Personal Guidance Students to consider what skills are required for waiters, builders, mechanics, to access the opportunities they are interested in. Going into work places/remote visits. Research. Writing C.Vs and cover letters.	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 5- Encounters with employers and employees Students to consider what skills are required to be an electrician, technician, games designer to access the opportunities they are interested in. Research.	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 5- Encounters with employers and employees Students to consider what skills are required to be a dietician, nutritionist, health care assistant to access the opportunities they are interested in. Research.	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 6 – Experience of Work places Students to consider what skills are required to be a chemist, pharmacist, cleaner, paramedic, to access the opportunities they are interested in. Looking at careers in sports and researching sports.	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 6 – Experience of Work places Students to consider what skills are required to be an optician, director, projector, radiographer, to access the opportunities they are interested in. Looking at careers in sports and researching sports.