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

8V - Venture Curriculum – *STEM 4 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: Life cycles and reproduction Living things and habitats **Suggested Key Questions:** How can we show a life cycle? What changes happen in a frog’s life? What does animal reproduction look like? Can we tell a story about animal babies? What parts of a flower help it grow seeds? How do seeds move to new places? What does an animal need in its home? Can we make a home for an animal? How are animals linked by food? What happens if one animal disappears? What can we make to help nature? How can we tell people to care for nature? **Key Skills and Knowledge:**	**Topic:** States of matter Properties and changes of materials **Suggested Key Questions:** What state is this object? Can we show what each state looks like? What happens when we heat or cool things? How do materials change? Which material is best for the job? What material would keep an animal dry? Can we get materials back? How can we clean dirty water? What changes can we reverse? What changes are permanent? What materials are best for building? Can we make a safe place for an animal? **Key Skills and Knowledge:**	**Topic:** Sound Light **Suggested Key Questions:** Can we see and feel sound? How does sound travel? What changes the pitch of a sound? Can we make sounds with different pitches? What gives us light? What happens when something blocks light? Can we bounce light? What makes a shadow bigger or smaller? What do our eyes and ears look like inside? How do we use light and sound to explore the world? How can light or sound keep us safe? How do we use light and sound everyday? **Key Skills and Knowledge:** Use tuning forks, rubber bands or rulers to explore vibrations.	**Topic:** Forces and mechanical devices **Suggested Key Questions:** What happens when we push or pull something? How can we measure a force? What does gravity do? What makes things slow down? How does a lever help us lift? How can we lift things with a pulley? What happens when gears turn? How do wheels help things move? What shape falls the slowest? What shape moves best in water? What machine can help us do a job? How does your machine use forces? **Key Skills and Knowledge:**	**Topic:** Plant life Growing plants **Suggested Key Questions:** What happens if a plant doesn’t get what it needs? How can we look after our plants? What does each part do? What can we see inside a plant? What are the stages of a plant’s life? What changes can we see in our plants? How do bees and wind help plants? How do seeds travel? How are plants different? What plants would you put in your garden? How do plants help the planet? How can we grow more plants? **Key Skills and Knowledge:** Set up a simple plant-growing experiment (e.g. cress or beans)	**Topic:** Rocks, fossils and soils Evolution **Suggested Key Questions:** How can we tell rocks apart? How do rocks change over time? How can we make our own fossil? What animals lived a long time ago? How are soils different? Which soil is best for growing plants? What helps animals live where they do? What would an animal need to survive in a desert or the Arctic? How are animals today linked to animals from the past? What changes might happen to animals in the future? How can we teach others about rocks, fossils or soil? What do animals need in their environment? **Key Skills and Knowledge:**

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	Make a wheel showing the life cycle of a butterfly. Use pictures to make a timeline of a frog's life. Build a model showing how animals reproduce. Make a comic strip showing an animal having babies. Make a flower model with labels. Try simple seed experiments. Design a habitat for an animal. Build a habitat using recycled materials. Make a food chain with pictures and arrows. Use a computer to make a food web. Design something to protect animals or plants. Make a poster or video to teach others.	Sort everyday items into solids, liquids and gases. Make a poster showing three states with examples. Do a simple experiment melting chocolate/ice. Make a diagram showing melting, freezing and boiling. Test materials to see which are waterproof or strong. Design a raincoat for an animal using tested materials. Try mixing and separating sand, salt and water. Make a simple filter or sieve to clean water. Try melting chocolate (reversible) and baking a cake (irreversible). Make a display showing reversible and irreversible changes. Design a shelter using different materials. Build a small model shelter for an animal.	Make a simple string telephone. Investigate pitch using bottles, straws or elastic bands. Make a simple musical instrument. Sort light sources (natural vs man made) Make a shadow puppet or silhouette. Use mirrors to reflect light and change direction. Investigate how shadows change size. Make a model of the ear or eye. Use mirrors and sound tubes to explore senses. Design a safety device using light or sound (e.g. alarm reflector) Create a poster or video showing how we use light and sound.	Explore pushing and pulling objects around the classroom. Make a simple force tester using elastic bands. Drop objects and compare how fast they fall. Test how different surfaces affect how things slide. Make a simple lever using a ruler and block. Build a basic pulley system using string and wheels. Explore how gears turn using simple gear sets or cardboard cur outs. Build a small care or machine on wheels. Drop paper shapes to test air resistance. Test objects in water to see which moves the fastest. Design a simple machine to help with a task (e.g. lifting, moving) Build or draw your machine and explain how it works.	Make a plant care chart or diary. Make a labelled model or drawing of a plant. Dissect a flower or plant to explore its parts. Create a life cycle wheel or a flipbook. Observe and record changes in growing plants. Make a model showing pollination or seed dispersal. Try simple seed dispersal experiments (e.g. paper helicopters) Sort and classify plants from pictures or samples. Design a garden with different types of plants. Design a poster or video about how plants help us. Build a mini greenhouse or planter.	Sort rock samples or pictures into 3 types. Make a rock cycle diagram using simple materials. Make a fossil imprint using clay or salt dough. Create a timeline showing when different animals lived. Investigate different soil types (sand, clay, loam) Test how well different soils hold water. Match animals to their environmetns and adaptations. Design an imaginary animal adapted to a chosen habitat. Create a simple family tree of an animal species. Make a flipbook showing how an animal might evolve. Design a museum display about rocks, fossils or soil. Build a model of a habitat that includes rocks and soil.
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	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance	Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance

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	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 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 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 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 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 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.