Oak Learning Partnership

Inclusion is at the **heart** of our trust

Long Term/Curriculum Plan

School: Crosshill School

Subject: Science – KS4 Explore

Curriculum Planning

at Oak Learning Partnership

Long Term Plans

(Year/Pathway Group Overviews)

- Curriculum content on what students will learn about the subject content and about the logical order for teaching the content.
- Clear five/three year progression through the curriculum, which includes: key topics, termly knowledge and skills.
- Each year group/pathway individually broken down with unit overviews.
- Details around prior learning required.
- Clear end points and assessment information.
- Adaptations and key concepts mapped out.

Medium Term Plans

(Unit of Work for Each Year Group/Pathway)

- Each unit broken down by individual lessons.
- Specific pedagogical choices detailed, with links to appropriate resources.

7 Phase Lesson Plans

Lesson by lesson planning, using all of the above to achieve curriculum aims, adapted for class needs.

Curriculum Leadership	Katie Phillips – Science and Technology Lead
School Intent	Upon entry to Crosshill School, students are assessed and placed within one of our three highly personalised pathways: **Inspire, Explore and Discover.** Within these pathways students needs are identified as formal, semi-formal and emergent learning styles. Each pathway has a bespoke curriculum and particular learning approach that enables all of our students to flourish. Throughout all pathways we build the curriculum around 6 main outcomes to ensure our students will: • **Know themselves** • **Possess functional skills** • **Be independent** • **Be good communicators** • **Be curious learners** • **Be prepared for adulthood** The outcomes above are personalised around the three identified pathways and leaders carefully craft personalised curriculum provision to meet the needs of the learners within the pathways. Students may transition into different pathways whilst they are at Crosshill. We recognise that as our young people develop and grow, so does their need for different skills, learning approaches and experiences. We are a responsive provision and review individual students' needs.
Subject Intent	At Crosshill School, Science is a practical and engaging subject that fosters curiosity, exploration, and a deeper understanding of the world. Our Science curriculum for learners within the Explore Pathway is tailored to support pupils in developing their awareness of themselves and the world around them. Through structured routines, adult-supported exploration, and consistent reinforcement, we nurture learners who are curious, engaged, and gradually building the confidence to take increasing ownership of their learning. We recognise that these learners benefit from highly structured, hands-on experiences that build understanding through repetition, real-life contexts, and multi-sensory engagement. Our aim is to create an environment where every pupil feels safe, supported, and inspired to explore scientific ideas in a way that is meaningful to them. Our intent is to develop confident, curious, and capable learners by: -Encouraging curiosity and exploration, where pupils are supported to engage in practical investigations using touch, sound, sight, movement, and smell. -Promoting the development of early scientific thinking, including noticing changes, making simple choices, asking for help, and responding to cause-and-effect experiences with adult support. - Supporting pupils to communicate their ideas using methods that work for them – including speech, symbols, signs, photographs, writing, and technology. -Celebrating discovery, nurturing confidence, and exploring new knowledge together.

Key Stage 2, National Curriculum Aims	**KS1 Links** Animals incl Humans Plants **KS2 Links** Animals incl Humans Electricity Space Properties of Materials States of Matter	**Key Stage 3, National Curriculum Aims**	**KS3 Biology Links** Cells, tissue, organs and systems, human biology including circulatory and respiratory systems Plant biology, photosynthesis, structure, reproduction Animal biology, classification and basic anatomy **KS3 Chemistry Links** Properties and changes of materials Atomic structure, chemical reactions **KS3 Physics Links** Earth and space, solar system, Earth's rotation Universe and Forces

Year 10	Year 11
Topic: Autumn **Biology – Humans** ***EL1 5021 - All about me*** ***EL1 5983 – My Body*** ***EL1 5551 – Science and Human Body*** ***WJEC Science and the Human Body Entry 2***	**Topic: Autumn** **Physics – Solar System** ***EL1 6130 – Our Solar System*** ***WJEC Science and Our Universe Entry 2***
Knowledge: **By the end of this unit, pupils will know:** **-Names of main external body parts (head, arms, legs, hands, feet, eyes, nose, ears, mouth)** **-Basic functions of body parts (e.g., legs for walking, eyes for seeing)** **-Five senses and their related organs (e.g., smell = nose)** **-Names and positions of key organs (heart, lungs, stomach)** **-How the heart and lungs work in simple terms** **-Importance of hygiene, healthy eating, and rest** **-Factors that affect health (diet, exercise, sleep)** ***See MTP for Entry 1/WJEC skills breakdown***	**Knowledge:** **By the end of this unit, pupils will know:** **-The solar system: Names and order of the planets from the sun** **-The sun: Understanding it as a star and its importance to Earth** **-Planet characteristics: Basic features such as size, surface (rocky or gaseous), and atmosphere** **-Earth's rotation causes day and night** **-The moon: Appearance and phases** **-Other celestial bodies: Stars, comets, and other objects in space** **-Space exploration: Basic awareness of astronauts, space missions, and technology used in space studies** **-Scale and distance: Concept of relative sizes and distances in the solar system** **-Using models and diagrams: Representing the solar system visually and practically** ***See MTP for Entry 1/WJEC skills breakdown***
Topic: Spring	**Topic: Spring**

Biology – Plants ***EL1 3227 – Plant Identification*** ***EL1 6247 – Identifying and growing plants*** ***WJEC Science and the Plant World Entry 2***	**Chemistry - Materials and Compounds** ***EL1 6123 – Properties and changes in material*** ***EL1 5023 – Introduction to solids, liquids and gases*** ***WJEC Making Useful Compounds Entry 2***
Knowledge: **By the end of this unit, pupils will know:** **-Basic plant parts: stem, leaf, root, flower** **-Types of plants: distinguishing between deciduous and evergreen trees/plants** **-Plant growth conditions: light, water, temperature, soil** **-Seed germination: basic requirements such as warmth, moisture, and air** **-Plant reproduction: basic flower parts (stamen, pistil) and their functions** **-Plant responses: how plants react to light (phototropism)** **-Plant care: watering, pruning, pest control, safe gardening practices** **-Uses of plants: food plants and other useful plants (e.g., herbs, flowers)** ***See MTP for Entry 1/WJEC skills breakdown***	**Knowledge:** **By the end of this unit, pupils will know:** **-Types of materials: Recognize common materials such as wood, metal, plastic, fabric, glass** **-Properties of materials: Understand and describe properties like hard, soft, flexible, waterproof, absorbent** **-States of matter: Identify solids, liquids, and gases and their basic properties** **-Changes of state: Understand melting, freezing, evaporation, condensation** **-Reversible and irreversible changes: Know the difference and give examples** **-Useful compounds: Recognize common compounds like water, salt, sugar** **-Making compounds: Understand simple processes like dissolving and mixing** **-Everyday uses: Know how materials and compounds are used in daily life** **-Safety: Understand safe handling of materials and substances** ***See MTP for Entry 1/WJEC skills breakdown***
Topic: Summer **Biology – Animals** ***EL1 1321 – Animal Care*** ***EL1 2998 – Caring for a pet*** ***EL1 7161 – Understand the needs of animals*** ***WJEC Intro into Animal Care Entry 2***	Topic: **Summer** **Physics – Electricity** ***EL1 5522 – Using and staying safe around electricity*** ***EL1 5554 – Working with Electrical circuits*** ***WJEC Working with electrical circuits Entry 2***
Knowledge: **By the end of this unit, pupils will know:** **-Common pets and animals: Recognize and name common pets (dogs, cats, rabbits, fish, birds, etc.)** **-Dietary requirements: Understand what different animals eat** **-Care equipment: Know essential equipment for animal care (bowls, cages, grooming tools)** **-Animal groups: Identify basic animal groups (mammals, birds, fish, reptiles)** **-Animal body parts and senses: Name body parts related to senses in animals and humans (eyes, ears, nose, legs, wings, fins)** **-Animal movement: Understand parts used for movement and how animals move differently** **-Basic animal needs: Food, water, shelter, exercise** **-Animal health: Recognize signs of health and illness in animals** **-Animal care routines: Feeding schedules, grooming, hygiene, safe handling** **-Selective breeding: Basic understanding of why animals are selectively bred** ***See MTP for Entry 1/WJEC skills breakdown***	**Knowledge:** **By the end of this unit, pupils will know:** **-What is electricity? Basic understanding of electricity as energy powering devices** **-Common electrical devices: Identification and uses in everyday life** **-Electrical hazards: Recognize dangers such as water, damaged cables, overloaded sockets** **-Safety rules: Understand how to use electricity safely and respond to emergencies** **-Basic circuit components: Battery, wires, bulb, switch, motor, buzzer** **-How circuits work: Complete vs incomplete circuits and effects on devices** **-Circuit diagrams and symbols: Recognize and use standard symbols to represent components** **-Conductors and insulators: Materials that allow or block electrical current** **-Everyday uses of circuits: Switches, alarms, motors in household devices** **-Sources of electricity: Basic awareness of where electricity comes from, including renewable and non-renewable sources** **-Environmental impact: Simple ideas about saving electricity and environmental responsibility** ***See MTP for Entry 1/WJEC skills breakdown***