1. Thinking and Working Scientifically

- Asking investigable questions and refining them
- Making predictions and simple hypotheses from prior knowledge
- Planning fair tests and comparative investigations
- Identifying independent, dependent, and control variables at an introductory level
- Choosing suitable apparatus and methods
- Measuring length, mass, volume, time, temperature, and other quantities using standard units
- Recording data in tables, charts, labelled diagrams, and simple spreadsheets where appropriate
- Presenting results using bar charts, line graphs, and simple scatter-style plots where appropriate
- Identifying patterns, trends, and anomalies
- Drawing conclusions linked to evidence
- Evaluating methods: fairness, repeatability, usefulness of results, accuracy, reliability, repeats, and improvements
- Laboratory safety, risk awareness, and responsible behaviour

2. Biology: Cells, Plants, Animals, Humans, and Ecosystems

- Cells as the basic unit of living things at an introductory level
- Plant and animal cells: simple similarities and differences where appropriate
- Organisation in living things: cells, tissues, organs, and systems at an introductory level
- Plant structure and function: roots, stems, leaves, flowers, fruits, and seeds
- Photosynthesis as the idea that plants make food using light
- Plant reproduction: flowers, pollination, seeds, and germination
- Plant growth requirements and investigations
- Human body systems: digestive, respiratory, circulatory, skeletal, and muscular systems at an age-appropriate level
- Nutrition, balanced diet, hygiene, exercise, and health
- Body balance / homeostasis as an introductory idea
- Respiration as an introductory life process
- Life cycles of plants and animals
- Habitats, ecosystems, food chains, and food webs
- Producers, consumers, decomposers, and energy flow at an introductory level
- Adaptations, interdependence, and classification of living things
- Microorganisms: useful and harmful roles

3. Chemistry: Particles, Materials, Mixtures, and Chemical Change

- Particle model of matter for solids, liquids, and gases
- Changes of state and particle behaviour
- Diffusion at an introductory level through simple examples
- Pure substances and mixtures at an introductory level
- Material properties: hardness, solubility, transparency, magnetism, conductivity, flexibility, strength, and durability
- Metals and non-metals: basic properties and uses

- Choosing materials for a purpose, including sustainability links
- Dissolving, solutions, and solubility at an introductory level
- Separation techniques: sieving, filtering, evaporation, magnets, distillation demonstration, and chromatography introduction where appropriate
- Physical and chemical changes
- Reversible and irreversible changes
- Acids, alkalis, indicators, and neutralisation at an introductory level where appropriate
- Safe handling of common substances and laboratory materials
- Earth materials such as rocks, soils, and minerals in chemistry and Earth science contexts

4. Physics: Forces, Motion, Energy, Waves, Electricity, and Magnetism

- Contact and non-contact forces
- Motion: distance, time, speed, direction, and simple distance-time ideas
- Friction, air resistance, and water resistance
- Gravity, mass, and weight at an introductory level where appropriate
- Balanced and unbalanced forces at an introductory level
- Simple machines: levers, pulleys, gears, wheels, and axles
- Energy stores and transfers at an introductory level
- Thermal energy: heating, cooling, insulation, and temperature change
- Light: sources, reflection, refraction introduction, shadows, and seeing objects
- Sound: vibrations, travel through media, pitch, loudness, and distance effects
- Electricity: circuits, components, current pathway model, symbols, conductors, and insulators
- Series and parallel circuits at an introductory level where appropriate
- Electrical safety and troubleshooting simple circuits
- Magnetism: magnetic materials, attraction, repulsion, magnetic fields, and electromagnets at an introductory level

5. Earth and Space

- Earth structure at an introductory model level
- Rocks, soils, minerals, and Earth materials
- Rock types and the rock cycle at an introductory level
- Weathering, erosion, and deposition
- The water cycle and its processes
- Weather vs climate
- Weather measurement and interpretation of weather data
- Seasonal patterns and daylight changes
- Earth, Sun, and Moon relationships
- Day and night, seasons, and Moon phases at an age-appropriate level
- The Solar System: the Sun, planets, moons, and scale awareness
- Gravity and orbital motion as introductory concepts where appropriate
- Earth resources: water, rocks, minerals, fuels, and land
- Environmental change, sustainability, and responsible resource choices

6. Science in STEM Contexts

- Science in everyday technologies, homes, schools, transport, communication, health, energy, and materials
- Science and design cycle: ask, design, test, improve
- Evidence-based decision making in real-life contexts
- Sustainability and resource choices: water, energy, materials, waste, and environment
- Interpreting simple scientific claims in media or everyday contexts
- Evaluating evidence quality at an introductory level
- STEM careers and interdisciplinary problem solving
- Teamwork, communication, and roles in STEM projects
- Ethics, honesty in data, safety, and responsibility in practical science