SCIENCE – WHOLE SCHOOL OVERVIEW 2023-2024

	AUTUMN		SPRING		SUMMER	
R	Let's Explore Marvellous Machines	The natural world	Long Ago Ready Steady Grow Signs of Spring	The natural world	Animal Safari On the Beach Creep, Crawl and Wriggle	The natural world
1	Everyday Materials	Materials; Natural materials; Human-made materials; Grouping materials; Properties of materials; Venn diagrams; Comparing and testing materials; Working scientifically – Identifying and classifying, Observing changes over time, Comparative test, Pattern seeking, Research	Seasonal changes	Seasons; Seasonal changes in deciduous and evergreen trees; Seasonal changes in animals; Weather; Seasonal weather; Day length; Investigating the Sun; Measuring wind; Measuring temperature; Measuring precipitation; Weather forecasting; Working scientifically – Observing changes over time, Identifying and classifying, Pattern seeking, Comparative test, Research	Plant Parts	Wild and garden plants; Seasonal changes; Plant parts; Seeds and bulbs; Investigating leaves; Importance of plants; Working scientifically – Identifying and classifying, Observing changes over time, Pattern seeking, Research, Comparative test
	Human Senses	Humans; Labelling body parts; Counting body parts; Similarities and differences in humans; Five senses – sight, hearing, touch, smell, taste; Senses and danger; Sensory loss and assistive tools; Sense of touch investigation; Working scientifically – Identifying and classifying, Comparative test, Pattern seeking, Research			Animal Parts	Animals' body parts; Animal groups – amphibians, birds, fish, invertebrates, mammals, reptiles; Carroll and Venn diagrams; Pets; Carnivores, herbivores and omnivores; Earthworms; Working scientifically – Identifying and classifying, Comparative test, Pattern seeking, Research
2	*Human Survival*	Human life cycle; Human needs for health and survival; Healthy lifestyle; Bodily hygiene routines; Handwashing investigation; How germs spread;	Animal Survival	Habitats; Invertebrates and invertebrate groups; Microhabitats; Animal needs for survival; Food chains; Human impact on habitats; Animal offspring; Lifecycles –	Habitats	Exploring habitats; Living and non-living things; Identifying plants and animals in a habitat; Animal shelter and food; Food chains; Animal adaptations; Camouflage

		Working scientifically – Identifying and classifying, Observing changes over time, Comparative test, Pattern seeking, Research		amphibians, birds, invertebrates, mammals and reptiles; Seasonal changes in animals; Habitat improvements; Working scientifically – Identifying and classifying, Observing changes over time; Pattern seeking; Research		investigation; Plant adaptations; Working scientifically – Identifying and classifying, Research, Pattern seeking
	Uses of Materials	Identifying materials and their properties; Shaping materials; Uses of materials; Linking properties to use; Sustainability and recycling; Working scientifically – Identifying and classifying, Pattern seeking, Comparative tests, Research			Plant Survival	Plant parts; Seasonal changes in plants; Investigating germination; Investigating plant growth; Unusual plants; Working scientifically – Observing changes over time, Identifying and classifying, Pattern seeking, Comparative test, Research
3	Animal Nutrition and the Skeletal System	Living things; Carnivores, herbivores and omnivores; Human diet; Human nutrition and food groups; Fatty foods; Seasonal changes in animals' diets; Human skeleton; Joints; Muscles; Skeleton types – endoskeletons and exoskeletons; Working scientifically – Identifying and classifying, Observing changes over time, Comparative test, Pattern seeking, Research	Rocks Relics and Rumbles	Rocks; Fossils; Soils	Plant nutrition and Reproduction	Plant parts; Root systems; Stems; Water transport; Investigating leaves; Life cycle of flowering plants; Flower parts; Researching pollination; Seed formation and dispersal; Variation in plant needs; Working scientifically – Identifying and classifying, Observing changes over time, Pattern seeking, Research, Comparative test
			Forces and Magnets	Pushing and pulling forces; Contact forces; Friction; Force meters; Bar charts; Non-contact forces; Magnetism; Magnetic attraction and repulsion; Magnetic fields; Magnetic properties; Magnetic Earth; Uses of friction and magnetism; Working scientifically – Identifying and classifying, Pattern seeking, Comparative tests, Research	Greenhouse	Requirements of plants for growth and survival; Testing properties of materials; Observation

					Light and Shadows	Light; Light sources and reflectors; Reflective and non-reflective materials; Sun safety and protection; Shadows; Opaque, transparent and translucent materials; Changes in shadows; Working scientifically – Identifying and classifying, Observing changes over time, Comparative tests, Pattern seeking, Research
4	Food and the Digestive System	Producers and consumers; Ecosystems; Food chains and food webs; Changes in ecosystems; Digestive system; Teeth types – incisors, canines, premolars, molars; Teeth health and dental hygiene; Working scientifically – Identifying and classifying, Observing changes over time, Comparative test, Pattern seeking, Research	Misty Mountain, Winding River	Water cycle; Habitats; Changing environments	Electrical Circuits and Conductors	Sources of electricity; Electrical devices; Electrical components; Series circuits; Complete and incomplete circuits; Conductivity; Conductors and insulators; Wired plugs; Incandescent light bulbs; Future of electricity; Working scientifically – Identifying and classifying, Pattern seeking, Comparative test, Research
	Sound	Sound facts; Investigating sound; Sound waves; How we hear sounds; Muffling sound investigation; Volume and distance investigation; Changing the volume of sound investigation; Changing the pitch of sound investigation; Investigating sound further; Working scientifically – Identifying and classifying, Comparative test, Pattern seeking, Research	Grouping and Classifying	Types of classification; Taxonomy; Understanding and creating classification keys; Animal kingdom; Plant kingdom; Classifying new discoveries; Working scientifically – Identifying and classifying, Pattern seeking, Research		
			State of Matter	Classifying solids, liquids and gases; Unusual materials; Particle theory; Change of state; Melting, freezing, evaporation and condensation; States of water; Measuring temperature; Investigating melting; Line graphs; Researching melting and boiling points; Working scientifically – Observing changes over time, Identifying and		

				classifying, Pattern seeking, Comparative test, Research		
5	Properties and Changes of Materials	Properties of materials; Thermal conductivity; Measuring temperature; Thermal insulators; Solubility; Heterogeneous and homogeneous mixtures; Sieving; Filtration; Evaporation; Separating unusual mixtures; Reversible and irreversible changes; Innovative materials; Working scientifically – Identifying and classifying, Observing changes over time, Comparative tests, Research, Pattern seeking	Forces and Mechanisms	Contact and non-contact forces; Gravity; Mass and Weight; Discovering gravity – important scientists; Friction; Air resistance; Water resistance; Mechanisms – levers, pulleys, gears; Investigating forces and mechanisms; Working scientifically – Identifying and classifying, Observing changes over time, Comparative tests, Research, Pattern seeking	Allotment	Life cycles of animals and plants; Working scientifically
			Earth and Space	The Solar System; Scientists of the past who discovered how the Solar System works; The Earth, Sun and Moon; Planets and stars are spherical; Daytime and night time; Sundials; Day length and the seasons; Times of the day around the world; The phases of the Moon; Lunar and solar eclipses; Working scientifically – Identifying and classifying, Research, Changes over time, Pattern seeking	Human Reproduction and Ageing	Animal life cycles; Stages and processes; Classifying mammals; Mammalian life cycles; Interpreting scatter graphs; Human life cycle; Human gestation stage; Human juvenile stage; Human adolescent stage; Puberty; Venn diagrams; Interpreting line graphs; Human sexual reproduction; Human ageing; Working scientifically – Observing changes over time, Identifying and classifying, Pattern seeking, Comparative test, Research

6	Circulatory System	Bodily systems; Circulatory system – role and main parts; Heart – structure and function; Blood – components and functions; Blood vessels – structure and function; Measuring heart rate; Proving a hypothesis; Heart rate investigation; Classifying foods; Effects of smoking, alcohol and drugs; Heart rate recovery investigation; Working scientifically – Identifying and classifying, Comparative test, Pattern seeking, Research	Frozen Kingdoms	Classifying living things; Classification keys; Adaptation; Investigations	Evolution and Inheritance	Five kingdoms, microorganisms and viruses; Classifying fossils; Theory of evolution and evolutionary tree diagrams; Inheritance and variation – continuous and discontinuous variation; Natural selection and survival of the fittest; Adaptations in birds' beaks; Adaptations in plants; Artificial selection; Testable hypothesis; Working scientifically – Identifying and classifying, Comparative test, Pattern seeking, Research
	Light Theory	Light facts; How light travels; Light, sight and the human eye; Visible light; Perceiving colour; Shadows; Reflections; Plane, concave and convex mirrors; Measuring light; Refraction; Working scientifically – Identifying and classifying, Comparative tests, Pattern seeking, Research	Electrical Circuits and components	Series circuits; Circuit components; Recognised circuit symbols; Investigating circuit components; Electric current; Voltage; Researching cells and batteries; Investigating voltage changes; Working scientifically – Identifying and classifying, Pattern seeking, Comparative test, Research		

denotes Driver Project