Science scope and sequence chart: Kindergarten to Grade 4

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
SCIENTIFIC ENQUIRY					
Use methods of scientific investigation	• Asking questions about objects, living things and the environment • Using all senses to develop intuitive ideas about the properties of materials and objects in the environment • Sorting objects into groups according to simple common characteristics	• Using all senses to collect evidence • Using both experience and information to answer questions	• Drawing conclusions from observations and data • Making predictions about the outcome of an investigation • Looking for simple patterns in observations	• Devising fair tests and justifying conclusions • Testing predictions and drawing conclusions • Making systematic observations and identifying patterns	• Collecting data and making observations in a systematic manner • Planning and deciding what evidence should be collected • Identifying key factors to vary • Importance of accuracy and the need to check observations • Estimation of quantities such as temperature and length
Process and communicate information	• Communicating observations orally and by drawing	• Classifying objects into groups according to common characteristics • Using pictorial means to record observations and data collected • Describing observations on how things feel, appear and what they sound like	• Knowing and using names of observed phenomena and objects • Using correct names for objects and processes • Making pictograms with simple scales • Labelling pictures	• Communicate observations through labelled pictures • Using words in their scientific context	• Constructing and interpreting two-way tables • Expressing results as bar charts • Recording observations in, and interpreting, simple diagrams • Classifying data and observations and drawing conclusions from the classification
Handle equipment and make measurements		• Following simple oral and visual instructions carefully and safely	• Using a tape measure and ruler • Making simple circuits • Follow instructions to assemble simple equipment	• Handling and using simple equipment • Carrying out simple experiments • Using a hand lens	• Handling more complex equipment • Measuring length and temperature • Measuring the mass and volume of a liquid

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LIFE SCIENCE					
Diversity and variation in living things	• Different organisms have different body forms, sizes, shapes and names	• The appearance of organisms changes over their lifetime		• Organisms can be grouped together and groups distinguished according to their common and unique characteristics • Organisms of the same type are generally similar but also have differences • Differences among humans must be respected	• Importance of identifying organisms correctly • Organisms can be identified using keys
Living things and their environment	• Common animals and plants in the local environment	• Organisms inhabit many different places (habitats) • Respect for living things and for the environment	• The life processes of animals and plants relate to their habitats • Habitats of animals and plants should be respected and cared for		• Different organisms are found in different habitats • Habitats are sensitive and can be disturbed by human actions • Similarities and differences in habitats and the ways in which these affect the organisms that live there • Change in habitat can make it unsuited to the organisms that live there • Habitats need protection
Life processes		• Animals move, feed, grow, use their senses and reproduce • Basic differences between living and non-living things	• Living things have specialised external forms and structures for particular life processes	• Living things have specialised internal forms and structures for particular life processes	• Life processes can be disturbed by injury, illness and inappropriate actions • Life history stages of fish, amphibians, reptiles, birds, mammals and insects

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Humans as organisms	• Names of external parts of the human body		• The senses that enable humans and other animals to be aware of the world around them	• The heart as a pump to circulate blood through vessels and around the body • Exercise and heart rate • Humans and some other animals have skeletons to support and protect the body and help them to move	• Humans and other animals produce offspring that grow and become adults
Health and hygiene	• Keeping clean is important to good health		• Basic function and care of teeth	• Exercise is important to health • Importance of an adequate and balanced diet for good health	• Effects on the human body of alcohol, tobacco and drugs • Good hygiene is important in protection from illness caused by micro-organisms
Green plants as organisms		• Green plants need water and light to stay alive and grow	• Seeds grow into flowering plants • Water is taken in by roots and transported through the stem to other parts of the plant	• Light, air, water and temperature affect the growth of green plants • Plant leaves are important in the production of new material for growth	• Main stages of reproduction in flowering plants • Ways in which seeds are dispersed
Micro-organisms				• Some organisms are too small to seen by eye	• Some micro-organisms can cause illness
MATERIALS					
Changing materials	• Making and testing structures using common materials • Recognising differences between materials	• Naming common materials and describing their physical characteristics • Classifying common objects and materials from which they are made	• Describing and testing properties of common materials • Classifying common materials as natural and synthetic • Permanent and temporary change: squashing, bending, heating, etc.	• Classifying simple materials on the basis of their physical properties • Uses of different materials • Identifying, testing and comparing common materials • Relating material properties to their use	• States of matter and physical properties of each state • Changes of state • Evaporation • Physical properties and uses of metals
EARTH AND SPACE					
Space					• Sun as a source of light • Shadow length and sundials • Causes of day and night • Sun as a source of heat

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PHYSICAL PROCESSES					
Forces and movement		• Different kinds of movement • Forces cause and change movement	• Effects of forces: squashing, twisting stretching, movement	• Forces have direction • Magnetic forces and uses of magnets • Forces in a compressed spring	
Matter and energy		• Touch as a sense to detect heat			• Estimating and measuring temperature • Heating and cooling • Conductors and insulators
Waves, light and sound	• Using senses • Light and sight • Light from the Sun • Dangers of looking at the Sun	• Hearing and seeing as senses • Making different sounds in different ways		• Transparency, opacity, shadows • Reflection by mirrors • Focusing light with a lens	• Sound, vibrations and music • Factors affecting loudness and pitch • Hearing sounds through solids, liquids and gases • Limits to hearing • Dangers of loud sounds
Electricity			• Common devices that use electricity • Making simple circuits • Use of cells to make electricity		