Atlas Science Curriculum

Our Science curriculum enables children to learn the important knowledge and concepts to describe and question the materiality of the world. They will learn the important role that science plays in the sustainability of life on earth and have knowledge and skills to question, and investigate scientific theories. We aim that children following this curriculum will be equipped to go onto their secondary education with curiosity, passion and a desire for further discovery and study of the subject.

	Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
FS1	**All about me** • The season of Autumn, leaves changing colour and falling from trees. • Animals begin to prepare for colder weather and hibernation e.g. Squirrels bury nuts in the ground. • Temperatures getting colder as winter approaches.	**Journeys** • Plan a journey to the local park, or around the school grounds what would we see? What grows in our school, what grows in the park? • People journey around the world to see different places and environments; Ernest Shackleton and his journey to the South Pole. • Contrasting environments; journeys to cold places, what would we need to take with us? Look at some recent memorable journeys, e.g., Perseverance landing on Mars.	**Dinosaurs** • We know about dinosaurs because people have found fossils in the ground. • Rocks can sometimes contain fossils that palaeontologists can study. • The dodo is an animal that is now extinct. It could not fly and so died out because of loss of habitat and introduction of animals to its island home.	**Growing and Changing** • Plants need water and light to grow (this will be built upon throughout the curriculum) • Grow 'beanstalks'; plant and observe plants growing e.g. Sunflowers, cress etc. Talk about how the plants change. • Investigate materials to create stable structures (wheat, sticks, blocks) • Make observations of the world around them, describe things they have seen e.g. Plants, animals, natural objects and man-made objects. • Recognise the season of Spring and notice new plants growing.	**Animals and their babies** • Recognise and use the following vocabulary: • Farm Animals: cow/calf, pig/piglet, sheep/lamb, chicken/chick, horse/foal • Pets: dog/puppy, cat/kitten • Wild animals: kangaroo/joey, lion/cub • Life cycles: chicks, caterpillars, tadpoles	**Heroes and Adventurers** • Ice investigation-(link to South Pole – Shackleton). Ice changes from a solid to a liquid when it melts. • Boats in water – explore floating and sinking. How many pennies can my boat hold? • Contrasting space with our local environment.
FS2	**Who am I?** • Families; when I was a baby, when my family members were young. • The human body: Facial features, body parts, the senses	**Why is it getting dark?** • Explore the natural world around them • Describe what they see, hear, feel whilst outside • Animal hibernation, why do some animals hibernate? How do other animals survive winter? Understand some important changes to the world around them including seasons	**How and why do we travel?** • Changing state of matter; frost and ice- looking closely at ice • Our planet Earth, land and sea, plants and animals, weather, gravity • The moon, the sun, the planets in our solar system, space travel, astronauts.	**How do living things grow and change?** • Seasons of the year: Spring • Identify trees and plants growing locally on the school grounds or in local parks. • Draw pictures of local plants. • Identify where the fruit and vegetables we eat come from.	**Why is the king important?** • Seasons of the Year: Summer. Signs of summer; flowers, warmer days, light evenings, butterflies, bees, birds	**What do we learn from stories?** • Seasons of the Year: Summer. • How we stay safe in the sun; sunscreen, hats, sunglasses

		• Seasons of the year; Autumn.				
Year 1	**The Human Body** • Introduction to Our Body and Our Senses • Eyes and Sight • Ears and Hearing • Touch, taste and smell • Understanding Sensory Impairment	**Animals and their Needs** • Amazing Animals (Introduction to Animals) • Grouping animals: fish, amphibians, reptiles, birds / mammals • Grouping animals: carnivores, herbivores and omnivores • Animals as pets • Describing animals	**Seasons and Weather** • The four seasons • Tools to record the weather • Using a graph to show information about the weather • Clouds and what they tell us: cirrus, cumulus and stratus • Weather forecasting	**Taking Care of the Earth** • Taking Care of the Earth • Earth's Natural Resources • Logging • Pollution • Recycling	**Plants** • What plants need • Parts of plants • Seeds • Deciduous and evergreen plants • Plants we eat	**Materials and Magnets** • Everyday Materials • Properties of Materials • Uses of Materials • Magnets • Investigation
	Disciplinary Knowledge W/S PKC • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Observing closely • Gathering data to help in answering questions • Performing simple tests	**Disciplinary Knowledge W/S PKC** • Using their observations and ideas to suggest answers to questions • Identifying and classifying	**Disciplinary Knowledge W/S PKC** • Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC** • Asking simple questions and recognising that they can be answered in different ways • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC** • Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC** • Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions
Year 2	**The Human Body** • Animals, including humans, survival & offspring • The Skeletal System, The Muscular System and Exercise • The Digestive system and Healthy Eating • Circulatory system Germs, diseases and preventing illness	**Living Things in their Environments** • Dead or Alive • What is a habitat? • Rainforest and Desert habitats • Meadow habitats Underground habitats	**Electricity** • Introduction to Electricity • Safety • Exploring Circuits (A) • Exploring Circuits (B) • Investigating conductive and non-conductive materials	**Plants** • Plants around us • Seeds and bulbs • Comparative test 1 • Comparative Test 2 • Food and Farming	**Materials and Matter** • Materials & their uses • George de Mestral and Velcro • Matter under the microscope • Changing Solid Objects Liquids and their properties	**Astronomy** • Introduction to Astronomy • Model the Solar System • Orbit and Rotation • The Moon and its Phases Constellations

	Disciplinary Knowledge W/S PKC- • Asking simple questions asking simple questions and recognising that they can be answered in different ways • Identifying and classifying • Using their observations and ideas to suggest answers to questions. • Gathering and recording data to answer questions	**Disciplinary Knowledge W/S PKC-** • Using their observations and ideas to suggest answers to questions • Identifying and classifying • Gathering and recording data to help in answering questions • Observing closely, using simple equipment • Asking simple questions and recognising that they can be answered in different ways	**Disciplinary Knowledge W/S PKC-** • Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC-** • Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC-** • Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions	**Disciplinary Knowledge W/S PKC-** • Asking simple questions and recognising that they can be answered in different ways • Identifying and classifying • Using their observations and ideas to suggest answers to questions
Year 3	**The Human Body** • The Muscular System • The Skeletal System • The Nervous System • Preparing to Eat • The Digestive System	**Cycles in Nature** • The Four Seasons (prior learning) • Seasonal Cycles in Plants • Life Cycle of a Plant • Animal Migration Life Cycle of a Frog	**Light** • Light and Dark • Transparent and opaque surfaces • Mirrors and reflection • Shadows Finding patterns in changing shadows	**Plants** • Botany and Flowering Plants • Requirements for life and growth • Water transportation in plants • Pollination in Flowering Plants Seed Dispersal	**Rocks** • Sorting rocks • How Rocks are Formed • Permeability • Fossils • Soil	**Forces and Magnets** • Forces (Gravity) • Friction • Magnet • Magnetic Poles and Fields • Investigating the strength of magnets
	Disciplinary Knowledge W/S PKC- • Asking relevant questions • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Using straightforward scientific evidence to answer questions • Identifying differences, similarities or changes related to simple scientific ideas and processes • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	**Disciplinary Knowledge W/S PKC-** • Asking relevant questions and using different types of scientific enquiries to answer them • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Using straightforward scientific evidence to answer questions or to support their findings	**Disciplinary Knowledge W/S PKC-** • Asking relevant questions and using different types of scientific enquiries to answer them • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gathering, recording, classifying and presenting data in a variety	**Disciplinary Knowledge W/S PKC-** • Asking relevant questions and using different types of scientific enquiries to answer them • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gathering, recording, classifying and presenting data in a variety	**Disciplinary Knowledge W/S PKC-** • Asking relevant questions and using different types of scientific enquiries to answer them • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	**Disciplinary Knowledge W/S PKC-** • Asking relevant questions and using different types of scientific enquiries to answer them • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gathering, recording, classifying and presenting data in a variety of

	• Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	• Identifying differences, similarities or changes related to simple scientific ideas and processes • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	of ways to help in answering questions • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Identifying differences, similarities or changes related to simple scientific ideas and processes • Using straightforward scientific evidence to answer questions or to support their findings	of ways to help in answering questions • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Identifying differences, similarities or changes related to simple scientific ideas and processes • Using straightforward scientific evidence to answer questions or to support their findings.	• Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Identifying differences, similarities or changes related to simple scientific ideas and processes • Using straightforward scientific evidence to answer questions or to support their findings.	ways to help in answering questions • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Identifying differences, similarities or changes related to simple scientific ideas and processes • Using straightforward scientific evidence to answer questions or to support their findings.
Year 4	**The Human Body** • Cells and Nutrients • Teeth and Senses • Digestion • A Healthy Diet • Vitamins and Minerals	**Classification of Plants and Animals** • Intro. To classification • Classes of vertebrates: Fish and Amphibians • Classes of vertebrates: Reptiles, Birds and Mammals • Classes of invertebrates Insects, Arachnids & Molluses • Classification of plants	**Ecology** • Living things and Habitats • Natural Cycles • Web of Living Things • Human Threats to the Environment • Ecology in our Local Area	**Sound** • What is sound? • Speed of sound • Qualities of sound - Pitch and Volume • Human Voice Ears- how we hear	**States of matter and the Water Cycle** • States of Matter • Evaporation • Condensation • Precipitation • The Water Cycle	**Electricity** • Electrical Safety • Parts of a circuit • Switches • Thomas Edison and Lewis Latimer • Investigating conductive and non-conductive materials

	Disciplinary Knowledge W/S PKC-	**Disciplinary Knowledge W/S PKC-**	**Disciplinary Knowledge W/S PKC-**	**Disciplinary Knowledge W/S PKC-**	**Disciplinary Knowledge W/S PKC-**	**Disciplinary Knowledge W/S PKC-**
	● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables# ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Asking relevant questions and using different types of scientific enquiries to answer them ● Using straightforward scientific evidence to answer questions or to support their findings ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Using straightforward scientific evidence to answer questions or to support their findings.	● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ● Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Using straightforward scientific evidence to answer questions or to support their findings	● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Using straightforward scientific evidence to answer questions or to support their findings	● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ● Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Using straightforward scientific evidence to answer questions or to support their findings

Year 5	**The Human Body** • Human Growth Stages • Adolescence and Puberty • Slowing Down • Growth in Humans and Animals • Preparation for Assessment (research and scientific drawing)	**Materials** • Properties of materials • Which material is best? • Solubility- which materials are most soluble/what solubility means • Separating mixtures- sieving, filtering, evaporating • Reversible changes- dissolving, mixing, change of state	**Living Things** • Life cycles of plants and animals in our local area • Reproduction in Plants • Life cycles of Mammals and Amphibians • Life cycles of insects and birds • The work of David Attenborough and Jane Goodall	**Forces** • Forces including gravity • Air resistance, water resistance and friction • Guided investigation: Paper Drop • Guided investigation: Paper Drop • Pulleys, gears and levers	**Astronomy** • The Big Bang and the expanding universe • Gravity • Our Solar System • The Moon • Our Galactic neighbourhood	**Meteorology** • Meteorology and the Atmosphere • The Ozone Layer • Air Movement • Cold and Warm Fronts • Thunder and Lightning
	Disciplinary Knowledge W/S PKC- • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	**Disciplinary Knowledge W/S PKC-** • Identifying scientific evidence that has been used to support or refute ideas or arguments • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Using test results to make predictions to set up further comparative and fair tests	**Disciplinary Knowledge W/S PKC-** • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions to set up further comparative and fair tests • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments

Year 6	**The Human Body** ● The Heart: Circulation of the Blood ● Blood Vessels and Transport ● Components of Human Blood ● Blood Pressure and Heart Rate ● Heart Rate- an Investigation	**Classification of Living Things** ● Classifying organisms ● Cells: Plant and Animal cells ● Taxonomy ● Vertebrates Invertebrates	**Electricity** ● Simple Series Circuits ● Parallel Circuits ● Switches ● Planning an investigation ● Investigation	**Light** ● How light travels ● How we see ● Shadows and their shapes ● The Colour of Light Making a periscope	**Reproduction** ● Asexual reproduction ● Sexual reproduction in non-flowering plants ● Sexual reproduction in flowering plants ● Reproduction in animals ● Growth stages	**Evolution** ● Fossils and Evolution ● Inheritance ● Adaptation ● Charles Darwin ● Alfred Wallace
	Disciplinary Knowledge W/S PKC- ● Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ● Identifying scientific evidence that has been used to support or refute ideas or arguments ● Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations	**Disciplinary Knowledge W/S PKC-** ● Identifying scientific evidence that has been used to support or refute ideas or arguments ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations ● Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	**Disciplinary Knowledge W/S PKC-** ● Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ● Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ● Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ● Using test results to make predictions to set up further comparative and fair tests ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations ● Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** ● Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ● Using test results to make predictions to set up further comparative and fair tests ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations ● Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** ● Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ● Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations ● Identifying scientific evidence that has been used to support or refute ideas or arguments	**Disciplinary Knowledge W/S PKC-** ● Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations ● Identifying scientific evidence that has been used to support or refute ideas or arguments

'The important thing is to not stop questioning' Albert Einstein