

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
Year 1	The Human Body 1. Introduction to Our Body and Our Senses 2. Eyes and Sight 3. Ears and Hearing 4. Touch, taste and smell 5. Understanding Sensory Impairment	Animals and their Needs 1. Amazing Animals (Introduction to Animals) 2. Grouping animals: fish, amphibians, reptiles, birds / mammals 3. Grouping animals: carnivores, herbivores and omnivores 4. Animals as pets 5. Describing animals	Seasons and Weather 1. The four seasons 2. Tools to record the weather 3. Using a graph to show information about the weather 4. Clouds and what they tell us: cirrus, cumulus and stratus 5. Weather forecasting	Taking Care of the Earth 1. Taking Care of the Earth 2. Earth's Natural Resources 3. Logging 4. Pollution 5. Recycling	Plants 1. What plants need 2. Parts of plants 3. Seeds 4. Deciduous and evergreen plants 5. Plants we eat	Materials and Magnets 1. Everyday Materials 2. Properties of Materials 3. Uses of Materials 4. Magnets 5. 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	The Human Body	Living Things in their	Electricity	Plants	Materials and Matter	Astronomy
2	1. Animals, incl humans, survival & offspring 2. The Skeletal System, The Muscular System and Exercise 3. The Digestive system and Healthy Eating 4. Circulatory system 5. Germs, diseases and preventing illness	 Dead or Alive What is a habitat? Rainforest and Desert habitats Meadow habitats Underground habitats 	1. Introduction to Electricity 2. Safety 3. Exploring Circuits (A) 4. Exploring Circuits (B) 5. Investigating conductive and non-conductive materials	 Plants around us Seeds and bulbs Comparative test 1 Comparative Test 2 Food and Farming 	 Materials & their uses George de Mestral and Velcro Matter under the microscope Changing Solid Objects Liquids and their properties 	 Introduction to Astronomy Model the Solar System Orbit and Rotation The Moon and its Phases Constellations
	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S
	PKC-	PKC-	PKC-	PKC-	PKC-	PKC-
	 Asking simple questions 	using their observations and	 asking simple questions and 	asking simple questions and	 Asking simple questions and 	 Asking simple questions and
	asking simple questions and	ideas to suggest answers to	recognising that they can be	recognising that they can be	recognising that they can be	recognising that they can be
	recognising that they can be	questions	answered in different ways	answered in different ways	answered in different ways	answered in different ways
	answered in different ways	 identifying and classifying 	 observing closely, using 	 observing closely, using 	 Observing closely, using 	 Identifying and classifying
	 Identifying and classifying 	 gathering and recording 	simple equipment •	simple equipment •	simple equipment •	 Using their observations
	 Using their observations 	data to help in answering	performing simple tests	performing simple tests	Performing simple tests	and ideas to suggest answers
	and ideas to suggest answers	questions	 identifying and classifying 	 identifying and classifying 	 Identifying and classifying 	to questions
	to questions	observing closely, using	 using their observations and 	 using their observations 	 Using their observations 	
	 Gathering and recording 	simple equipment	ideas to suggest answers to	and ideas to suggest answers	and ideas to suggest answers	
	data to answer questions	 asking simple questions 	questions	to questions	to questions	
		and recognising that they can	 gathering and recording 	 gathering and recording 	 Gathering and recording 	
		be answered in different ways	data to help in answering	data to help in answering	data to help in answering	
			questions	questions	questions	

Voor	The Human Body	Cycles in Nature	Light	Plants	Rocks	Forces and Magnets
Year	The numan body	Cycles in Nature	Ligit	Pidiits	ROCKS	Forces and iviagnets
3	 The Muscular System The Skeletal System The Nervous System Preparing to Eat The Digestive System 	1.The Four Seasons (prior learning) 2.Seasonal Cycles in Plants 3.Life Cycle of a Plant 4.Animal Migration 5.Life Cycle of a Frog	 Light and Dark Transparent and opaque surfaces Mirrors and reflection Shadows Finding patterns in changing shadows 	 Botany and Flowering Plants Requirements for life and growth Water transportation in plants Pollination in Flowering Plants Seed Dispersal 	 Sorting rocks How Rocks are Formed Permeability Fossils Soil 	 Forces (Gravity) Friction Magnet Magnetic Poles and Fields Investigating the strength of magnets
	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S	Disciplinary Knowledge W/S
	PKC-	PKC-	PKC-	PKC-	PKC-	PKC-
	 Asking relevant questions 	asking relevant questions	 asking relevant questions 	asking relevant questions	 Asking relevant questions 	 asking relevant questions
	 Recording findings using 	and using different types of	and using different types of	and using different types of	and using different types of	and using different types of
	simple scientific language,	scientific enquiries to answer	scientific enquiries to answer	scientific enquiries to answer	scientific enquiries to answer	scientific enquiries to answer
	drawings, labelled diagrams,	them	them	them	them	them
	keys, bar charts, and tables	 recording findings using 	 setting up simple practical 	 setting up simple practical 	 Setting up simple practical 	 setting up simple practical
	Using straightforward	simple scientific language,	enquiries, comparative and	enquiries, comparative and	enquiries, comparative and	enquiries, comparative and
	scientific evidence to answer	drawings, labelled diagrams,	fair tests	fair tests	fair tests	fair tests
	questions	keys, bar charts, and tables	making systematic and	making systematic and	Making systematic and	making systematic and
	Identifying differences,	reporting on findings from	careful observations and,	careful observations and,	careful observations and,	careful observations and,
	similarities or changes related	enquiries, including oral and	where appropriate, taking	where appropriate, taking	where appropriate, taking	where appropriate, taking
	to simple scientific ideas and	written explanations, displays	accurate measurements using	accurate measurements using	accurate measurements using	accurate measurements using
	processes	or presentations of results	standard units, using a range	standard units, using a range	standard units, using a range	standard units, using a range
	Reporting on findings from	and conclusions	of equipment, including	of equipment, including	of equipment, including	of equipment, including
	enquiries, including oral and	using straightforward	thermometers and data	thermometers and data	thermometers and data	thermometers and data
	written explanations, displays	scientific evidence to answer	loggers	loggers	loggers	loggers
	or presentations of results	questions or to support their	• gathering, recording,	• gathering, recording,	Gathering, recording,	• gathering, recording,
	and conclusions	findings	classifying and presenting	classifying and presenting	classifying and presenting	classifying and presenting
	Gathering, recording,	• identifying differences,	data in a variety of ways to	data in a variety of ways to	data in a variety of ways to	data in a variety of ways to
	classifying and presenting	similarities or changes related	help in answering questions •	help in answering questions •	help in answering questions •	help in answering questions •
	data in a variety of ways to	to simple scientific ideas and	recording findings using	recording findings using	Recording findings using	recording findings using
	help in answering questions	processes	simple scientific language,	simple scientific language,	simple scientific language,	simple scientific language, drawings, labelled diagrams,
		setting up simple practical	drawings, labelled diagrams,	drawings, labelled diagrams,	drawings, labelled diagrams,	-
		enquiries, comparative and	keys, bar charts, and tables	keys, bar charts, and tables	keys, bar charts, and tables	keys, bar charts, and tables
		fair tests	reporting on findings from	reporting on findings from	Reporting on findings from	reporting on findings from
		making systematic and careful observations and	enquiries, including oral and	enquiries, including oral and	enquiries, including oral and	enquiries, including oral and
		· · · · · · · · · · · · · · · · · · ·	written explanations, displays	written explanations, displays	written explanations, displays	written explanations, displays
		careful observations and, where appropriate, taking	written explanations, displays	written explanations, displays	written explanations, displays	written explanations, displays

	accurate measurements using	or presentations of results	or presentations of results	or presentations of results	or presentations of results
	standard units, using a range	and conclusions	and conclusions	and conclusions	and conclusions
	of equipment, including	 using results to draw 	identifying differences,	 Using results to draw 	 using results to draw
	thermometers and data	simple conclusions, make	similarities or changes related	simple conclusions, make	simple conclusions, make
	loggers	predictions for new values,	to simple scientific ideas and	predictions for new values,	predictions for new values,
	 using results to draw simple 	suggest improvements and	processes	suggest improvements and	suggest improvements and
	conclusions, make predictions	raise further questions	 using straightforward 	raise further questions	raise further questions
	for new values, suggest	 identifying differences, 	scientific evidence to answer	 Identifying differences, 	 identifying differences,
	improvements and raise	similarities or changes related	questions or to support their	similarities or changes related	similarities or changes related
	further questions	to simple scientific ideas and	findings.	to simple scientific ideas and	to simple scientific ideas and
	 gathering, recording, 	processes		processes	processes
	classifying and presenting	 using straightforward 		 Using straightforward 	 using straightforward
	data in a variety of ways to	scientific evidence to answer		scientific evidence to answer	scientific evidence to answer
	help in answering questions	questions or to support their		questions or to support their	questions or to support their
		findings		findings.	findings.

Year The Human Body Classification of Plants **Ecology** Sound States of matter and the Electricity Water Cycle and Animals 4 Cells and Nutrients 1. Living things and What is sound? 1. Electrical Safety Teeth and Senses Habitats 2. Speed of sound States of Matter Parts of a circuit 1. Intro. to classification 3. Digestion Natural Cycles Qualities of sound 2. Evaporation 3. Switches 2. Classes of vertebrates: A Healthy Diet Web of Living Things - Pitch and Condensation 4. Thomas Edison and Fish and Amphibians Vitamins and 4. Human Threats to Volume Precipitation **Lewis Latimer** 3. Classes of vertebrates: Minerals the Environment Human Voice 5. The Water Cycle 5. Investigating Reptiles, Birds and 5. Ears- how we 5. Ecology in our Local Mammals conductive and non-Area hear conductive materials 4. Classes of invertebrates Insects, Arachnids & Molluscs 5. Classification of plants Disciplinary Knowledge W/S PKC-PKC-PKC-PKC-PKC-PKC- Asking relevant questions Asking relevant questions • identifying differences, asking relevant questions recording findings using and using different types of and using different types of asking relevant questions similarities or changes related simple scientific language, and using different types of scientific enquiries to answer scientific enquiries to answer and using different types of to simple scientific ideas and drawings, labelled diagrams, scientific enquiries to answer them them scientific enquiries to answer processes keys, bar charts, and tables# them Setting up simple practical • Setting up simple practical them • reporting on findings from • identifying differences. • setting up simple practical enquiries, comparative and enquiries, comparative and setting up simple practical fair tests enquiries, including oral and similarities or changes related enquiries, comparative and fair tests enquiries, comparative and Making systematic and Making systematic and written explanations, displays to simple scientific ideas and fair tests careful observations and, careful observations and, fair tests or presentations of results processes making systematic and where appropriate, taking where appropriate, taking making systematic and and conclusions asking relevant questions careful observations and, accurate measurements using accurate measurements using careful observations and, asking relevant questions and using different types of where appropriate, taking standard units, using a range standard units, using a range where appropriate, taking and using different types of scientific enquiries to answer accurate measurements using of equipment, including of equipment, including accurate measurements using scientific enquiries to answer standard units, using a range them thermometers and data thermometers and data standard units, using a range them • using straightforward of equipment, including loggers loggers · Gathering, recording, • Gathering, recording, of equipment, including setting up simple practical scientific evidence to answer thermometers and data classifying and presenting classifying and presenting thermometers and data enquiries, comparative and questions or to support their loggers data in a variety of ways to data in a variety of ways to loggers fair tests findings gathering, recording, help in answering questions • help in answering questions • gathering, recording, • reporting on findings from using results to draw classifying and presenting Recording findings using Recording findings using classifying and presenting simple conclusions, make enquiries, including oral and data in a variety of ways to simple scientific language, simple scientific language, data in a variety of ways to predictions for new values, written explanations, displays help in answering questions • drawings, labelled diagrams, drawings, labelled diagrams, help in answering questions • keys, bar charts, and tables keys, bar charts, and tables or presentations of results recording findings using suggest improvements and Identifying differences, Reporting on findings from recording findings using raise further questions and conclusions simple scientific language. similarities or changes related enquiries, including oral and simple scientific language, recording findings using drawings, labelled diagrams, to simple scientific ideas and written explanations, displays drawings, labelled diagrams, keys, bar charts, and tables simple scientific language, processes or presentations of results keys, bar charts, and tables • reporting on findings from drawings, labelled diagrams, Using straightforward and conclusions keys, bar charts, and tables enquiries, including oral and scientific evidence to answer

		 reporting on findings from 	written explanations, displays	questions or to support their	 Using results to draw
	ϵ	enquiries, including oral and	or presentations of results	findings.	simple conclusions, make predictions for new values, suggest improvements and raise further questions
	v	written explanations, displays	and conclusions		
	c	or presentations of results	 using results to draw 		
	a	and conclusions	simple conclusions, make		Identifying differences,
		 identifying differences, 	predictions for new values,		similarities or changes related
	s	similarities or changes related	suggest improvements and		to simple scientific ideas and
	t	to simple scientific ideas and	raise further questions		 Using straightforward
	ŗ	processes	 identifying differences, 		scientific evidence to answer questions or to support their findings
		using straightforward	similarities or changes related		
	s	scientific evidence to answer	to simple scientific ideas and		
	c	questions or to support their	processes		
	f	findings.	using straightforward		
			scientific evidence to answer		
			questions or to support their		
			findings		

Year

5

The Human Body:

- Human Growth Stages
- 2. Adolescence and Puberty
- 3. Slowing Down
- 4. Growth in Humans and Animals
- Preparation for Assessment (research and scientific drawing)

Materials

- 1. Properties of materials
- 2. Which material is best?
- Solubility- which materials are most soluble/what solubility means
- 4. Separating mixturessieving, filtering, evaporating
- 5. Reversible changesdissolving, mixing, change of state

Living Things

- Life cycles of plants and animals in our local area
- 2. Reproduction in Plants
- 3. Life cycles of Mammals and Amphibians
- 4. Life cycles of insects and birds
- The work of David Attenborough and Jane Goodall

Forces

- 1. Forces including gravity
- 2. Air resistance, water resistance and friction
- 3. Guided investigation: Paper Drop
- 4. Guided investigation: Paper Drop
- 5. Pulleys, gears and levers

Astronomy

- 1. The Big Bang and the expanding universe
- 2. Gravity
- 3. Our Solar System
- 4. The Moon
- 5. Our Galactic neighbourhood

Meteorology

- 1. Meteorology and the Atmosphere
- 2. The Ozone Layer
- 3. Air Movement
- 4. Cold and Warm Fronts
- 5. Thunder and Lightning

Disciplinary Knowledge W/S

- •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 controllingvariables 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

The Human Body **Classification of Living Evolution** Electricity Light Reproduction Year **Things** 6 1. The Heart: 1. Simple Series Circuits 1. How light travels 1. Asexual reproduction 1. Fossils and Circulation of the 1. Classifying organisms 2. Parallel Circuits How we see Sexual reproduction in Evolution Blood 2. Cells: Plant and Animal 3. Switches Shadows and their non-flowering plants 2. Inheritance 2. Blood Vessels and cells 4. Planning an investigation 3. Sexual reproduction in 3. Adaptation shapes Transport 3. Taxonomy 5. Investigation 4. The Colour of Light flowering plants Charles Darwin 3. Components of 4. Vertebrates Making a periscope Reproduction in Alfred Wallace **Human Blood** 5. Invertebrates animals 4. Blood Pressure and 5. Growth stages **Heart Rate** 5. Heart Rate- an Investigation Disciplinary Knowledge W/S Disciplinary Knowledge W/S Disciplinary Knowledge W/S **Disciplinary Knowledge** Disciplinary Knowledge W/S Disciplinary Knowledge W/S PKC-PKC-PKC-W/S PKC-PKC- Recording data and results • Identifying scientific • planning different types of PKC-• Planning different types of reporting and presenting of increasing complexity using evidence that has been used scientific enquiries to answer planning different types scientific enquiries to answer findings from enquiries, questions, including recognising scientific diagrams and labels, to support or refute ideas or of scientific enquiries to questions, including including conclusions, causal classification keys, tables, arguments • Reporting and and controlling variables where recognising and controlling relationships and answer questions, scatter graphs, bar and line presenting findings from necessary including recognising and variables where necessary explanations of and a degree graphs enquiries, including taking measurements, using a controlling variables where Recording data and results of trust in results, in oral and Identifying scientific conclusions, causal range of scientific equipment, necessary of increasing complexity using written forms such as displays scientific diagrams and labels, evidence that has been used relationships and with increasing accuracy and • using test results to make and other presentations to support or refute ideas or explanations of and a degree precision, taking repeat readings predictions to set up classification keys, tables, • Identifying scientific evidence that has been used arguments of trust in results, in oral and when appropriate further comparative and scatter graphs, bar and line Planning different types of written forms such as displays recording data and results of fair tests • reporting and to support or refute ideas or graphs and other presentations • Reporting and presenting scientific enquiries to answer increasing complexity using presenting findings from arguments questions, including Recording data and results scientific diagrams and labels, enquiries, including findings from enquiries, recognising and controlling of increasing complexity using classification keys, tables, conclusions, causal including conclusions, causal variables where necessary scientific diagrams and labels, scatter graphs, bar and line relationships and relationships and Reporting and presenting classification keys, tables, graphs explanations of and a explanations of and a degree findings from enquiries, scatter graphs, bar and line • using test results to make degree of trust in results, in of trust in results, in oral and including conclusions, causal graphs predictions to set up further oral and written forms such written forms such as displays relationships and comparative and fair tests as displays and other and other presentations explanations of and a degree reporting and presenting presentations • Identifying scientific of trust in results, in oral and findings from enquiries, identifying scientific evidence that has been used written forms such as displays including conclusions, causal evidence that has been to support or refute ideas or and other presentations relationships and explanations used to support or refute arguments of and a degree of trust in ideas or arguments 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