Atlas Science Curriculum

ATLAS ACADEMY
Astrea Academy Trust
INSPIRING BEYOND MEASURE

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 2	**The Human Body** 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	**Living Things in their Environments** 1. Dead or Alive 2. What is a habitat? 3. Rainforest and Desert habitats 4. Meadow habitats 5. Underground habitats	**Electricity** 1. Introduction to Electricity 2. Safety 3. Exploring Circuits (A) 4. Exploring Circuits (B) 5. Investigating conductive and non-conductive materials	**Plants** 1. Plants around us 2. Seeds and bulbs 3. Comparative test 1 4. Comparative Test 2 5. Food and Farming	**Materials and Matter** 1. Materials & their uses 2. George de Mestral and Velcro 3. Matter under the microscope 4. Changing Solid Objects 5. Liquids and their properties	**Astronomy** 1. Introduction to Astronomy 2. Model the Solar System 3. Orbit and Rotation 4. The Moon and its Phases 5. Constellations
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Year 3	**The Human Body** 1. The Muscular System 2. The Skeletal System 3. The Nervous System 4. Preparing to Eat 5. The Digestive System	**Cycles in Nature** 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** 1. Light and Dark 2. Transparent and opaque surfaces 3. Mirrors and reflection 4. Shadows 5. Finding patterns in changing shadows	**Plants** 1. Botany and Flowering Plants 2. Requirements for life and growth 3. Water transportation in plants 4. Pollination in Flowering Plants 5.Seed Dispersal	**Rocks** 1. Sorting rocks 2. How Rocks are Formed 3. Permeability 4. Fossils 5. Soil	**Forces and Magnets** 1. Forces (Gravity) 2. Friction 3. Magnet 4. Magnetic Poles and Fields 5. 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 • 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 • 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 • 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	**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 • 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	**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 • 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	**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 • 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	**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 • 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

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Year 4	**The Human Body** 1. Cells and Nutrients 2. Teeth and Senses 3. Digestion 4. A Healthy Diet 5. Vitamins and Minerals	**Classification of Plants and Animals** 1. Intro. to classification 2. Classes of vertebrates: Fish and Amphibians 3. Classes of vertebrates: Reptiles, Birds and Mammals 4. Classes of invertebrates Insects, Arachnids & Molluscs 5. Classification of plants	**Ecology** 1. Living things and Habitats 2. Natural Cycles 3. Web of Living Things 4. Human Threats to the Environment 5. Ecology in our Local Area	**Sound** 1. What is sound? 2. Speed of sound 3. Qualities of sound – Pitch and Volume 4. Human Voice 5. Ears- how we hear	**States of matter and the Water Cycle** 1. States of Matter 2. Evaporation 3. Condensation 4. Precipitation 5. The Water Cycle	**Electricity** 1. Electrical Safety 2. Parts of a circuit 3. Switches 4. Thomas Edison and Lewis Latimer 5. Investigating conductive and non-conductive materials
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Year 5	**The Human Body:** 1. Human Growth Stages 2. Adolescence and Puberty 3. Slowing Down 4. Growth in Humans and Animals 5. Preparation for Assessment (research and scientific drawing)	**Materials** 1. Properties of materials 2. Which material is best? 3. Solubility- which materials are most soluble/what solubility means 4. Separating mixtures- sieving, filtering, evaporating 5. Reversible changes- dissolving, mixing, change of state	**Living Things** 1. 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 5. 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
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Year 6	**The Human Body** 1. The Heart: Circulation of the Blood 2. Blood Vessels and Transport 3. Components of Human Blood 4. Blood Pressure and Heart Rate 5. Heart Rate- an Investigation	**Classification of Living Things** 1. Classifying organisms 2. Cells: Plant and Animal cells 3. Taxonomy 4. Vertebrates 5. Invertebrates	**Electricity** 1. Simple Series Circuits 2. Parallel Circuits 3. Switches 4. Planning an investigation 5. Investigation	**Light** 1. How light travels 2. How we see 3. Shadows and their shapes 4. The Colour of Light **5.** Making a periscope	**Reproduction** 1. Asexual reproduction 2. Sexual reproduction in non-flowering plants 3. Sexual reproduction in flowering plants 4. Reproduction in animals 5. Growth stages	**Evolution** 1. Fossils and Evolution 2. Inheritance 3. Adaptation 4. Charles Darwin 5. Alfred Wallace
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