Parklee Science- Whole School Overview- Two Year Cycle
2024-2025 – All Classes Follow CYCLE A
Nursery Follow CYCLE 2

The Science curriculum covers the main principles of biology, chemistry and physics through a variety of engaging units supported by the comprehensive ***Developing Experts*** Science scheme. It is planned and sequenced so that new knowledge and skills build on what has been taught before, and towards its clearly defined end points.

The start and end of units do not always coincide with school half-term holidays. If National Curriculum statements for the unit have been covered and the pupils are secure, we move on to the next unit.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS Working Scientifically	In the EYFS, the characteristics of effective learning from the Statutory Framework for the Early Years Foundation Stage are the foundations on which the working scientifically skills build in Key Stage 1. While children are playing and exploring, teachers should be modelling, encouraging and supporting them to do the following: • show curiosity and ask questions • make observations using their senses and simple equipment • make direct comparisons • use equipment to measure • record their observations by drawing, taking photographs, using sorting rings or boxes and, in Reception, on simple tick sheets • use their observations to help them to answer their questions • talk about what they are doing and have found out • identify, sort and group.					
Nursery CYCLE 1	**Marvellous Me** ***All About Me*** ***Senses*** ***Autumn*** ***My Family*** -Use all their senses in hands-on exploration of natural materials. -Begin to make sense of their own life-story and family's history. -Understand the key features of the life cycle of a plant and an animal. -Begin to understand the need to respect and care	**Local Heroes** ***Fires & Fire Safety*** ***Dental Hygiene &*** ***Personal Hygiene*** -Show interest in different occupations -Explore how things work. - -Continue developing positive attitudes about the differences between people. *Firefighters by Rebecca Hunter* *Bathroom Boogie by Clare*	**Adventures** ***Winter & changes in materials*** -Understand the key features of the life cycle of a plant and an animal. -Use all their senses in hands-on exploration of natural materials. -Explore and talk about different forces they can feel. .Talk about the differences between materials and changes they notice. *Lost and found by Oliver Jeffers*	**On the Farm** ***Planting Seeds & Growing Plants*** ***Life Cycles*** ***Animals & their Habitats*** -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. -Plant seeds and care for growing plants. -Understand the key features	**Jungle Explorers** ***Life Cycles*** ***Animal Types & Habitats*** ***Animal Facts*** -Plant seeds and care for growing plants. -Understand the key features of the life cycle of a plant and an animal. - Begin to understand the need to respect and care for the natural environment and all living things. -Know that there are	**Birthdays, Transitions & Holidays** ***Differences & Changes in Materials*** ***Months of the Year*** ***Change in Time & Growing Up*** ***Differences in People & Countries of the World*** -Use all their senses in

	for the natural environment and all living things. - Continue developing positive attitudes about the differences between people. *We're going on a leaf hunt by Steve Metzger & Miki sakamoto* *The same but different by Molly Potter*	*Foges & Al Murphy*	*The Gruffalo by Julia Donaldson*	of the life cycle of a plant and an animal. - Begin to understand the need to respect and care for the natural environment and all living things. *Jasper's Beanstalk by Nick Butterworth* *Non-fiction life cycle stories – caterpillar, frog & chick.*	different countries in the world and talk about the differences they have experienced or seen in photos. *Rumble in the jungle by Giles Andreae*	hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. -Talk about the differences between materials and changes they notice. -Explore how things work. -Begin to understand the need to respect and care for the natural environment and all living things. -Continue developing positive attitudes about the differences between people. -Know that there are different countries in the world and talk about the differences they have experienced or seen in photos. *Somebody swallowed Stanley by Sarah Roberts & Hannah Peck* *The Very Hungry Caterpillars Birthday Party by Eric Carle*
Nursery CYCLE 2	**Marvellous Me** ***All About Me*** ***Senses*** ***Autumn*** ***My Family*** -Use all their senses in hands-on exploration of natural materials. -Begin to make sense of their own life-story and family's history. -Understand the key features of the life cycle of a plant and an animal. -Begin to understand the need to respect and care	**Local Heroes** ***Fires & Fire Safety*** ***Dental Hygiene & Personal Hygiene*** -Show interest in different occupations -Explore how things work. - -Continue developing positive attitudes about the differences between people. *Firefighters by Rebecca Hunter* *Bathroom Boogie by Clare Foges & Al Murphy*	**Amazing Atherton** ***Differences & Changes in Materials*** ***Explore Collections of Materials*** ***How Things Work*** -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. -Talk about the differences between materials and changes they notice.	**Master Chefs** ***How Things Work*** ***Different Food Types*** ***Healthy Eating*** ***Baking*** ***Planting Seeds & Growing Plants*** ***Life Cycles*** -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. -Talk about the differences	**On the Move** ***Forces*** ***Speed*** ***Floating & Sinking*** -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. -Talk about the differences between materials and changes they notice. -Explore how things work. -Explore and talk about different forces they can	**Ocean Commotion** ***Life Cycles*** ***Sealife & Creatures*** ***Changes in Materials*** ***Floating & Sinking*** ***Recycling*** -Use all their senses in hands-on exploration of natural materials. -Understand the key features of the life cycle of a plant and an animal. -Explore collections of materials with similar and/or

	for the natural environment and all living things. - Continue developing positive attitudes about the differences between people. *We're going on a leaf hunt by Steve Metzger & Miki sakamoto* *The same but different by Molly Potter*		-Explore how things work. *The three little pigs by Ladybird tales* *Atherton – non-fiction – maps & pictures*	between materials and changes they notice. -Explore how things work. *The little red hen by Ladybird tales* *The gingerbread man by Ladybird tales*	feel. *Who sank the boat by Michael Rosen* *The train ride by Jude Crebbin*	different properties. -Talk about the differences between materials and changes they notice. -Explore how things work. -Explore and talk about different forces they can feel. *Billy's bucket by Kes Gray*
Reception	**Understanding The World - Early Learning Goals** -Explore the natural world around them, making observations and drawing pictures of animals and plants. -Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. -Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.					

Reception Cycle A & B **Enhancements:** Mad Science Assembly	**Seasons** **EYFS Science** **Weather & Seasons** **The senses** **Our Body** ***How I've Changed*** ***Body Parts*** ***The 5 Senses*** ***Autumn*** -Name and describe people who are familiar to them. -Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, healthy eating, toothbrushing, having a good sleep routine. -Explore the natural world around them. -Describe what they see, hear and feel whilst outside. -Recognise some environments that are different to the one in which they live. -Understand the effect of changing seasons on the natural world around them. *Marie Curie (Little People Big Dreams Book)*	**Seasons** **EYFS Science** **Materials** **Space** ***Identifying Materials*** ***Using Magnets*** -Explore the natural world around them. -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. *Neil Armstrong (Little People Big Dreams Book)*	**Changes** **EYFS Science** **Weather & Seasons** **Forces** **Machines** ***Winter*** ***Floating and Sinking*** -Explore the natural world around them. -Describe what they see, hear and feel whilst outside. -Understand the effect of changing seasons on the natural world around them. -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. *Vanessa Nakate (Little People Big Dreams Book)*	**Changes** **EYFS Science** **Animals** **Food** ***Life Cycle of a Chick*** ***Spring*** ***Materials*** -Understand the key features of the life cycle of a plant and an animal. -Begin to understand the need to respect and care for the natural environment and all living things. -Understand the effect of changing seasons on the natural world around them. -Use all their senses in hands-on exploration of natural materials. -Explore collections of materials with similar and/or different properties. *Greta Thunberg (Little People Big Dreams Book)*	**Journeys** **EYFS Science** **Weather & Seasons** **Plants** **Food** ***Exploring Maps,*** ***Local Area Walk,*** ***The 4 Seasons*** ***Life Cycle of a Plant*** ***How to Care for a Plant*** -Explore the natural world around them. -Describe what they see, hear and feel whilst outside. -Recognise some environments that are different to the one in which they live. -Plant seeds and care for growing plants. -Understand the key features of the life cycle of a plant and an animal. -Begin to understand the need to respect and care for the natural environment and all living things. -Know and talk about the different factors that support their overall health and wellbeing: healthy eating *David Attenborough (Little People Big Dreams Book)*	**Journeys** **EYFS Science** **Animals** **Plants** **Insects & Invertebrates** ***Jurassic Coast,*** ***Fossils,*** ***Nature Walks,*** ***Minibeasts,*** ***Changes in Nature*** - Explore the natural world around them. -Describe what they see, hear and feel whilst outside. -Recognise some environments that are different to the one in which they live. -Understand the effect of changing seasons on the natural world around them. -Understand the key features of the life cycle of a plant and an animal. -Begin to understand the need to respect and care for the natural environment and all living things. *Mary Anning (Little People Big Dreams Book)*

KS1 Years 1 & 2 Working Scientifically	During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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					
KS1 Years 1 & 2 Cycle A **Enhancements:** Mad Science Assembly	**Y1 Animals inc Humans : All About Me** Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense *Elizabeth Garett Anderson (Physician and Surgeon)* *William Addis (Toothbrush Inventor)* **Insight Data- Y1 Animals inc Humans**	**Y1 Animals inc Humans : All About Animals** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify and name a variety of common animals that are carnivores, herbivores and omnivores *Rachel Carson (Marine Pollution)* **Insight Data- Y1 Animals inc Humans**	**Y2 Uses of Everyday Materials** Identify and compare the suitability of a variety of everyday materials Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching *Charles Mackintosh (Waterproof coat)* **Insight Data- Y2 Uses of Everyday Materials**	**Y1 Exploring Everyday Materials 2** Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock Distinguish between an object and the material it is made from Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties *Chester Greenwood (Earmuffs)* **Insight Data- Y1 Exploring Everyday Materials**	**Y2 Animals inc Humans2:Life cycles** Notice that animals, including humans, have offspring which grow into adults *Chris Packham (Animal Conservationist)* **Insight Data- Y2 Animals inc Humans**	**Y1 Plants** Become familiar with common names of flowers and plant structures including seeds Identify and describe the basic structure of a variety of common flowering plants, including trees Identify and name a variety of common wild and garden plants Identify and name a variety of deciduous and evergreen trees Understand how plants change over time Observe the growth of planted flowers Keep records of how plants change over time *Beatrix Potter (Author & Botanist)* **Insight Data- Y1 Plants**

KS1 Years 1 & 2 Cycle B	Y2 Living Things and their Habitats	Y1 Seasonal Changes	Y1 Exploring Everyday Materials 1	Y2 Plants	Y2 Animals inc Humans1 : Growth	Y2 Living things and their Habitats : Habitats around the World
Enhancements: Mad Science Assembly Chester Zoo	Explore and compare the differences between things that are living, dead, and things that have never been alive Identify and name a variety of plants and animals in their habitats, including microhabitats Describe how animals obtain their food from plants and other animals Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain Identify and name different sources of food *Liz Bonnin (Conservationist)* *Jane Goodall (Primatologist)* **Insight Data- Y2 Living Things and their Habitats**	Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies *Dr Steve Lyons (Extreme Weather)* **Insight Data- Y1 Seasonal Changes**	Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock Distinguish between an object and the material it is made from Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties *John MacAdam (Tarmac)* **Insight Data- Y1 Exploring Everyday Materials**	Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy Understand the requirements of plants for germination, growth and survival, as well as, the processes of reproduction and growth in plants *Agnes Arber (Botanist)* **Insight Data- Y2 Plants**	Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene *Steve Irwin (Wildlife expert)* *Robert Winston (Human Scientist)* **Insight Data- Y2 Animals inc Humans**	Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including microhabitats *David Attenborough (conservationist)* **Insight Data- Y2 Living Things and Their Habitats**

Lower KS2 Years 3 & 4 Working Scientifically	During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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.

Lower KS2 Years 3 & 4 Cycle A	**Y3 Scientific Enquiry**	**Y3 Rocks**	**Y3 Forces and Magnets**	**Y3 Animals inc Humans**	**Y3 Plants**	**Y3 Light**
Enhancements: Mad Science Assembly	Asking relevant questions and using different types of scientific enquiries to answer them Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 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 Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Setting up simple practical enquiries, comparative and fair tests Using straightforward scientific evidence to answer questions or to support their findings Using results to draw simple conclusions, make	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Explore how and why [rocks] might have changed over time (non-statutory) Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter *Mary Anning (Fossils)* *Dr Anjana Khatwa (Geologist)* *William Smith (Fossils)* *Inge Lehrmasn (Earth's Mantle)* *Katia Krafft (Geologist and Volcanologist)* **Insight Data- Y3 Rocks**	Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance Compare how things move on different surfaces Describe magnets as having 2 poles Predict whether 2 magnets will attract or repel each other, depending on which poles are facing Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials *Andre Marie Ampere (Electro-magnetism)* *The Wright Brothers (Airplanes)* *Henry Ford (Cars)* **Insight Data- Y3 Forces & Magnets**	Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat Identify that humans and some other animals have skeletons and muscles for support, protection and movement *Marie Curie (Radiation)* *Wilhelm Rontgen (X rays)* *Adelle Davis (Nutritionist)* **Insight Data- Y3 Animals inc humans**	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant Identify and describe the functions of different parts of a flowering plant Investigate the way in which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal *Joseph Banks (Botanist)* *Ahmed Mumin Warfa (Botanist)* **Insight Data- Y3 Plants**	Recognise that they need light in order to see things and that dark is the absence of light Recognise that light from the sun can be dangerous and that there are ways to protect their eyes Notice that light is reflected from surfaces Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change *Justus Von Liebig (Mirrors)* *James Clerk Maxwel (Visible and Invisible Waves of Light)* **Insight Data- Y3 Light**

	predictions for new values, suggest improvements and raise further questions **Insight Data- Y3 Working Scientifically**					
Lower KS2 Years 3 & 4 Cycle B **Enhancements:** Mad Science Assembly Chester Zoo	**Y4 Electricity** Identify common appliances that run on electricity Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery Recognise some common conductors and insulators, and associate metals with being good conductors Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery *Michael Faraday (Magnets and Electricity)* *Thomas Edison (Lightbulb)* *Joseph Swan*	**Y4 States of Matter** Compare and group materials together, according to whether they are solids, liquids or gases Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature *Joseph Priestly (Discovered oxygen)* *Anders Celsius (Temperature Scale)* *Daniel Fahrenheit (Temperature Scale)* *George Washington Carver (Chemist)* **Insight Data- Y4 states of matter**	**Y4 Animals inc Humans** Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey *Joseph Lister (Antiseptic)* *Ivan Pavlov (Digestive System Mechanisms)* *Washington & Lucius Sheffield (Toothpaste)* **Insight Data- Y4 Animals inc Humans**	**Y4 Living Things and their Habitats** Recognise that living things can be grouped in a variety of ways Making a guide to local living things (non- statutory) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment *Jacques Cousteau (Marine Biology)* *Cindy Looy (Environmental Change and Extinction)* *Joean Beauchamp Procter (Zoologist)* **Insight Data- Y4 Living things and their Habitats**	**Y4 Sound** Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the volume of a sound and the strength of the vibrations that produced it Recognise that sounds get fainter as the distance from the sound source increases *Alexander Graham Bell (Invented telephone)* *Aristotle (Sound Waves)* *Gailileo Galilei (Frequency and Pitch of Sound Waves)* **Insight Data- Y4 Sound**	**Y4 Living Things and their Habitats- Conservation** Recognise that environments can change and that this can sometimes pose dangers to living things *David Attenborough (conservationist)* *Greta Thunberg (Conservationist)* **Insight Data- Y4 Living things and their Habitats**

	(Incandescent Light Bulb) **Insight Data- Y4 Electricity**					
Upper KS2 Years 5 & 6 Working Scientifically	During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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					
Upper KS2 Years 5 & 6 Cycle A **Enhancements:** Mad Science Assembly Atherton High School	**Y5 Animals inc Humans** Describe the changes as humans develop to old age *Leonardo Da Vinci (Anatomy)* *Santorio Santorio (Anatomist)* *Dr. Katherine Dibb – (Cardiovascular Sciences)* *Justus von Liebig (Theories of Nutrition)* *Sir Richard Doll (Smoking)* **Insight Data- Y5 Animals inc Humans**	**Y5 Properties of Materials** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Compare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heat Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide	**Y5 Forces** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect *Isaac Newton (Gravity)* *Albert Einstein (The Theory of Relativity)* *Galileo Galilei (Gravity and Acceleration)* *Archimedes of Syracuse (Levers)* **Insight Data- Y5 Forces**	**Y5 Living Things and their Habitats** Describe the life process of reproduction in some plants and animals Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird *Jane Goodall (Naturalist) Sylvia Earle (Marine Biologist)* *Sir David Attenborough (Animal Behaviourist)* **Insight Data- Y5 Living Things and Their Habitats**	**Y6 Light** Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes *Thomas Edison (Light Bulb)* *Patricia Bath (Sight)*	**Y5 Earth and Space** Describe the Sun, Earth and Moon as approximately spherical bodies Describe the movement of the Earth and other planets relative to the Sun in the solar system Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky Describe the movement of the Moon relative to the Earth *Margaret Hamilton (Computer scientist Moon Landings)* *Stephen Hawking (Black Holes)* *Mae Jemison (Astronaut)* *Claudius Ptolemy and Nicolaus Copernicus (Heliocentric vs Geocentric Universe)* *Helen Sharman (GB*

		how mixtures might be separated, including through filtering, sieving and evaporating *Becky Schroeder (Fluorescence material)* *Spencer Silver, Arthur Fry and Alan Amron (Post-Its)* *Ruth Benerito (Wrinkle-Free Cotton)* **Insight Data- Y5 Properties & Changes of Materials**			*Thomas Young (Wave Theory of Light)* *Ibn al-Haytham (Light and our Eyes)* *Percy Shaw (The Cats Eye)* **Insight Data- Y6 Light**	*Astronaut)* *Caroline Herschel (First to find a comet)* **Insight Data- Y5 Earth & Space**
Upper KS2 Years 5 & 6 Cycle B **Enhancements:** Mad Science Assembly RIS Assembly Atherton High School	**Y6 Animals inc Humans** Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Describe the ways in which nutrients and water are transported within animals, including humans Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function *Virginia Apgar (Obstetrical Anaesthesiologist)* **Insight Data- Y6 Animals inc Humans**	**Y6 Electricity** Use recognised symbols when representing a simple circuit in a diagram Associate the brightness of a bulb or the volume of a buzzer with the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches *Nikola Telsa (AC electric system)* *Alessandro Volta (Electrical Battery)* *Nicola Tesla (Alternating Currents)* *Edith Clarke (Electrical Engineer)* **Insight Data- Y6 Electricity**	**Y6 Living Things and their Habitats** Give reasons for classifying plants and animals based on specific characteristics Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals *Carl Linneus(Classification)* *Libby Hyman (Classification Invertebrates)* **Insight Data- Y6 Living Things and Their Habitats**	**Y5 Changes of Materials** Describe how to recover a substance from a solution Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning. *Sir Humphrey Davy (Separating gases)* *Jamie Garcia (Invention of a new plastic)* **Insight Data- Y5 Properties & Changes of Materials**	**Y6 Evolution and Inheritance** Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago *Hippocrates (Medicine)* *Charles Darwin (Evolution)* *Alfred Russell Wallace (Naturalist)* *Rosalind Franklin (DNA)* *Nettie Stevens (Geneticist)* **Insight Data- Y6 Evolution & Inheritance**	**Y6 Looking After our Environment** 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 Using test results to make predictions to set up further comparative and fair tests *Dr. Paula Kahumbu (Wildlife Conservationist)* *Mangala Mani (Antarctic scientist)* **Insight Data- Y6 Working Scientifically**