

New Park Primary Academy – Curriculum long term plan

It is up to the class teachers which topic(s) they choose to include as part of their science-based project each year and which they wish to teach as independent science topics within their 2-week slots. When planning teachers should consider working scientifically and the investigations they will facilitate alongside the teaching of subject content.

Year 1/2	1/5	2/6	3/7	4/8
A	<p>States of matter (1)</p> <ul style="list-style-type: none"> - distinguish between an object and its material - identify and name a variety of everyday materials - describe physical properties of everyday materials - compare and group a variety of every day materials based on their physical properties. <p>People: Brian Cox</p>	<p>Animals (1)</p> <ul style="list-style-type: none"> - identify and name a variety of common animals - describe and compare the structure of a variety of common animals - identify, name, draw and label the basic parts of the human body - associate senses with specific parts <p>People: Luigi Galvani, George Washington Carver, Jane Goodall</p>	<p>Plants (1)</p> <ul style="list-style-type: none"> - identify and name a variety of common wild and garden plants including trees - identify and describe the basic structure of a variety of flowering plants including trees. <p>People: Beatrix Potter</p>	<p>Habitats</p> <ul style="list-style-type: none"> - explore and compare things that are living, dead and never alive - identify most living things live in specific habitats and provide basic needs - identify and name plants and animals in their habitat - describe how animals obtain food (food chains) <p>People: Arthur Tansley</p>
B	<p>States of matter (2)</p> <ul style="list-style-type: none"> - identify and compare the suitability of everyday materials for particular uses - find out how the shapes of solid objects made from some materials can be changed <p>People:</p>	<p>Animals (2)</p> <ul style="list-style-type: none"> - notice animals have offspring which grow - find out about the basic needs of animals - describe the importance of diet, exercise, and hygiene <p>People: Florence Nightingale, Joseph Priestly</p>	<p>Plants (2)</p> <ul style="list-style-type: none"> - observe and describe how seeds bulb and grow into mature plants - find out and describe how plants need water, light, and a suitable temperature to grow and stay healthy <p>People: Theophrastus</p>	<p>Seasonal Changes</p> <ul style="list-style-type: none"> - observe changes across the four seasons - observe and describe weather associated with the seasons and how day length varies. <p>People: Aristotle</p>

In Year 1/2 Year A or the first year of a topic should be Year 1 objectives then Year B should follow Year 2 objectives except habitats and seasonal changes which are found only once in the curriculum.

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Year 3/4	1/5	2/6	3/7	4/8
A	<p>Animals</p> <ul style="list-style-type: none"> - identify that animals need to eat and get the right nutrition - identify some animals have skeletons and muscles and why - describe function of the digestive system - identify and describe the function of the different types of teeth <p>People: Mary Maynard Daly, James Lind</p>	<p>Electricity</p> <ul style="list-style-type: none"> - identify appliances that run on electricity - construct series circuits and name components - identify if series circuits will work (are complete loops) - recognise how switches work - recognise conductors and insulators <p>People: Michael Faraday</p>	<p>Plants</p> <ul style="list-style-type: none"> - identify and describe the functions of parts of a plant - explore the requirements of plants for life and growth - explore the way in which water is transported within plants - explore the part that flowers play in the life cycle of a flowering plant <p>People: Jan Ingenhousz</p>	<p>Sound</p> <ul style="list-style-type: none"> - identify how sounds are made (vibration) - recognise how sound travels to the ear - find patterns between volume and vibration strength - recognise that sounds get fainter as the sources gets further away <p>People: Robert Boyle, Ernst Chladni, Pythagoras</p>
B	<p>Forces</p> <ul style="list-style-type: none"> - compare how things move on different surfaces - notice that some forces need contact between 2 objects, but magnets can act at distance - observe how magnets attract or repel <ul style="list-style-type: none"> - group magnetic and non-magnetic materials - describe magnets as having 2 poles - predict whether 2 magnets will attract or repel <p>People: William Gilbert</p>	<p>Light</p> <ul style="list-style-type: none"> - recognise that they need light to see <ul style="list-style-type: none"> - notice that light is reflected - recognise that light from the sun can be dangerous - recognise how shadows are formed - find patterns in the way that shadows change size <p>People: Thomas Edison, Joseph Sawn</p>	<p>Habitats</p> <ul style="list-style-type: none"> - recognise that living things can be grouped in different ways <ul style="list-style-type: none"> - explore and use classification keys - identify and name living things in their local and wider environment <p>People: Alexander von Humboldt</p>	<p>States of matter</p> <ul style="list-style-type: none"> - compare and group materials together according to whether they are solids, liquids, and gases - observe that some materials change state - identify the part played by evaporation and condensation in the water cycle <p>People: Albert Einstein</p>

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Year 5/6	1/5	2/6	3/7	4/8
A	<p style="text-align: center;">Light</p> <ul style="list-style-type: none"> - 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 how we see things and how this relies on light - use the idea that light travels in straight lines to explain shadows shapes <p>People: Al-Hasan Ibn al-Haythma, Robert Hooke, Aristotle</p>	<p style="text-align: center;">Evolution</p> <ul style="list-style-type: none"> - recognise that living things have changed over time - know that fossils provide information about living things that inhabited the Earth - recognise that living things produce offspring of the same kind - identify how animals and plants are adapted to suit their environment and that adaptation may lead to evolution. <p>People: Barbara McClintock, Charles Darwin, James Watson (DNA)</p>	<p style="text-align: center;">Habitats</p> <ul style="list-style-type: none"> - describe the differences in the life cycle of a mammal, amphibian, an insect, and a bird - describe the life process of reproduction in some plants and animals - describe how living things are classified into broad groups according to common characteristics and based on similarities and differences - give reasons for classifying plants and animals based on specific characteristics <p>People: Carl Linnaeus</p>	<p style="text-align: center;">States of Matter</p> <ul style="list-style-type: none"> - describe everyday materials on the basis of their properties - know that some materials will dissolve to form a solution and how to recover a substance - use knowledge of solids, liquids, and gases to decide how to separate mixtures - give reasons, based on evidence from testing, for the particular use of everyday materials - demonstrate that dissolving, mixing and changes of state are reversible <p>People: Stephanie Kwolek</p>
B	<p style="text-align: center;">Animals</p> <ul style="list-style-type: none"> - describe the changes as humans develop to old age - identify the main parts of the circulatory system and describe their functions - recognise the impact of diet, exercise, drugs, and lifestyle on the way their bodies function - describe the ways in which nutrients and water are transported within animals including humans <p>People: William Harvey, Tu Youyou, Elizabeth Blackburn</p>	<p style="text-align: center;">Forces</p> <ul style="list-style-type: none"> - 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 <p>People: Isaac Newton</p>	<p style="text-align: center;">Electricity</p> <ul style="list-style-type: none"> - associate the brightness of a lamp 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 - use recognised symbols when representing a simple circuit in a diagram <p>People: Nikola Tesla, Benjamin Franklin</p>	<p style="text-align: center;">Earth and Space</p> <ul style="list-style-type: none"> - describe the movement of the Earth and other planets relative to the sun - describe the movement of the moon relative to Earth - describe the sun, Earth, and moon as approximately spherical bodies - use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. <p>People: Sara Seager, Tim Peake, Stephanie Wilson, Chris Hadfield, Helen Sharman, Alan Guth</p>

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