MANLEY PARK
PRIMARY SCHOOL
GROWING TOGETHER

VISION

Manley Park: we all belong.

Together, we are committed to all learners being inspired to achieve academic success. We provide learning experiences that are relevant, motivational and challenging. Our curriculum and collaborative learning approaches nurture individual personal growth. Pupils become socially responsible citizens of our community and the world.

CURRICULUM INTENT

Intention one: Our learners will achieve excellent and sustained academic progress.

Intention two: Our learners will develop effective lifelong learning behaviours.

Intention three: Our learners will be supported to think critically and creatively.

Intention four: Our learners will become well informed and responsible citizens.

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Science Whole School Overview

EYFS

Programme for Study	Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension					
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EI values	**Be respectful**	**Be understanding**	**Be compassionate**	**Be responsible**	**Be patient**	**Be positive**
EYFS Theme	**All About Us** ***(Diversity)***	***Celebrations and Festivals (Values and Perception)***	**Friendship and Fairness** ***(Social Justice)***	**Caring for our Environment** ***(Sustainable development)***	**People who Help Us** ***(Interdependence)***	**Changes** ***(Aspirations)***
Nursery LQ	**What Makes Me Special?**	***What Are Special Times for Me and My Family?***	**What Makes a Good Friend?**	**What is the Environment?**	**Who Helps Us?**	**How Have I Changed?**
Ongoing Nursery	• **Use all their senses in hands-on exploration of natural materials.(Chemistry)** • **Talk about what they see, using a wide vocabulary. (Biology and Chemistry)** • **Explore how things work(Physics)** • **Begin to understand the need to respect and care for the natural environment and all living things (Biology)**					
Termly Objectives Breakdown Nursery	**Use all their senses in hands-on exploration of natural materials.(Chemistry)** **Explore how things work.(Physics)** **Talk about what they see, using a wide vocabulary.(Biology and Chemistry)**	**Talk about the differences between materials and changes they notice. (Chemistry)** *Baking gingerbread men and talk about the changes they see (link with Literacy)* *Melting and freezing (link with Xmas/cold temperature)*	**Explore and talk about different forces they can feel. (Physics)** **Explore how things work.(Physics)** *Magnets, floating and sinking , slopes and how things move*	**Plant seeds and care for growing plants. (Biology)** **Explore collections of materials with similar and/or different properties. (Chemistry)** *Planting (Link with Jack and the Beanstalk) Identifying and classifying materials that belong in the same group*		**Understand the key features of the life cycle of a plant and an animal. (Biology)** **Begin to understand the need to respect and care for the natural environment and all living things. (Biology)** *Life cycle of a butterfly (Link with LIteracy) and how to look after the natural world around*

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	Explore the textures and some of natural materials using our senses - (Link with We're going on a Bear Hunt) *Operate and manipulate mechanical toys.*					*me.*
Reception LQ	**How Are We All Different?**	***Why Do We Celebrate?***	**How Can I Be Fair?**	**How do I Look After the Environment?**	**How Do People Help Us?**	**Do I Notice How Things Have Changed?**
Ongoing Reception	• **Explore the natural world around them. (Biology and Chemistry)** • **Understand the effect of changing seasons on the natural world around them. (Biology)** • **Describe what they see, hear and feel whilst outside (Biology and Chemistry)**					
Termly Objectives Breakdown Reception	**Explore the natural world around them. (Biology and Chemistry)** **Describe what they see, hear and feel whilst outside (Biology and Chemistry)** **Understand the effect of changing seasons on the natural world around them. (Biology)** *Seasonal Observations Signs of seasons and what the environment around them looks like during that season*	**Describe what they see, hear and feel whilst outside (Biology and Chemistry)** *Length of days and how shadows are created- LIttle Glow* *Hibernation link with Autumn Poem and seasonal changes*	**Describe what they see, hear and feel whilst outside (Biology and Chemistry)** **Understand the effect of changing seasons on the natural world around them. (Biology)** *Heating up-baking, melting and freezing (Link with English Lost and Found, The little red hen)*	**Explore the natural world around them.(Biology and Chemistry)** **Recognise some environments that are different from the one in which they live. (Biology)** **Understand the effect of changing seasons on the natural world around them.(Biology)** **Describe what they see, hear and feel whilst outside (Biology and Chemistry)** *Environments in different countries and how to look after them- Recycling and exploration of materials- Link with Literacy (Tidy)* *Planting*	**Describe what they see, hear and feel whilst outside (Biology and Chemistry)** *Tasting vegetables that they have grown (Link with little red riding hood- food for Grandma)*	**Understand the effect of changing seasons on the natural world around them. (Biology)** **Describe what they see, hear and feel whilst outside. (Biology and Chemistry)** *Seasonal Observations Signs of seasons and what the environment around them looks like during that season*

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KS1/2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EI values	Be respectful	Be understanding	Be compassionate	Be responsible	Be patient	Be positive
Whole School Theme	Diversity	Values & Perceptions	Social Justice	Sustainable Development	Interdependence	Aspirations
KS1 KQ	Can I recognise the beauty of different people and places?	Can I understand that people have different values?	Do I understand and value fairness?	Do I understand the origins of what I have?	Who do I depend on and who depends on me?	Who should we admire?
Year 1	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **ANIMALS INC HUMANS** *Identify, name, describe and compare common animals inc humans* (Celebrating beauty and difference of animals. Body parts looking at difference eg deaf, blind) Leonardo Da Vinci (Anatomical drawing, 'Vitruvian Man')	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **ANIMALS INC HUMANS** *Identify, name, describe and compare common animals inc humans* (Celebrating beauty and difference of animals. Body parts looking at difference eg deaf, blind) Leonardo Da Vinci (Anatomical drawing, 'Vitruvian Man')	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **ANIMALS INC HUMANS** *Identify, name, describe and compare common animals inc humans* (Celebrating beauty and difference of animals. Body parts looking at difference eg deaf, blind) Leonardo Da Vinci (Anatomical drawing, 'Vitruvian Man')	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **EVERYDAY MATERIALS** *Identify, name and describe materials and their properties.* (What materials can go back into the environment sustainable) Charles Macintosh	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **EVERYDAY MATERIALS** *Identify, name and describe materials and their properties.* (What materials can go back into the environment sustainable) Charles Macintosh	**SEASONAL CHANGES and PLANTS (ONGOING)** Jim Cantore (Meteorologist and storm tracker) Nehemiah Grew **EVERYDAY MATERIALS** *Identify, name and describe materials and their properties.* Charles Macintosh
Year 2	**PLANTS** **ANIMALS INC HUMANS** *Animal needs, offspring growing into adults* (Offspring growing into adults, similarities and differences) Florence Nightingale	**PLANTS** **ANIMALS INC HUMANS** *Animal needs, offspring growing into adults* (Offspring growing into adults, similarities and differences) Florence Nightingale	**PLANTS** **EVERYDAY MATERIALS** *Consolidation and deepening* **USES OF EVERYDAY MATERIALS** *Identify and compare materials* Scientists John Dunlop, and John McAdam.	**PLANTS** **USES OF EVERYDAY MATERIALS** *Identify and compare materials* (What materials can go back into the environment sustainable) Scientists John Dunlop, and John McAdam.	**PLANTS** **LIVING THINGS AND THEIR HABITATS** *Difference between alive and dead/ what lives where and why* (Living things depend on their environment to survive. What and who do I depend on?)	**PLANTS** **LIVING THINGS AND THEIR HABITATS** *Difference between alive and dead/ what lives where and why* (Living things depend on their environment to survive. What and who do I depend on?)

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	(Nurse and founder of modern nursing)	(Nurse and founder of modern nursing)			Prem Singh Gill (Polar Scientist who studies where Antarctic seals live, breed and feed, so we can know more about where they prefer to live) Dawood Qureshi (Marine Biologist who studies wildlife in the ocean)	Prem Singh Gill (Polar Scientist who studies where Antarctic seals live, breed and feed, so we can know more about where they prefer to live) Dawood Qureshi (Marine Biologist who studies wildlife in the ocean
LKS2 KQ	**Can I find out what draws groups of people to certain places?**	**Can I understand how our values affect the way we live?**	**Do I recognise that actions have intended and unintended consequences?**	**Do I appreciate the value that sustainable resource use has on us and future generations?**	**Do I understand how action and choices made in the UK impact on the rest of the world?**	**Who do I want to be and what do I want to achieve?**
Year 3	**ROCKS** (Land use in geography and stone age in history) Scientists, Mary Anning Florence Bascom (Geologist who studied the origin and formation of mountains)	**ANIMALS INC HUMANS** *Animals and human nutrition / skeletons and muscles* (Values connected to food choice and the way we live) Marie Curie (Physicist who invented the first mobile x-ray machine to treat soldiers wounded on the battlefield in WWI)	**FORCES AND MAGNETS** *Contact and non contact forces* (Action and consequence) Isaac Newton	**PLANTS** *Structure and function of plants* (Time of the year, leading into interdependence theme) Carl Linnaeus (Botanist who studied the conditions for successfully growing bananas and developed a method to reproduce them in Europe) Dr Kelsey Byers (Biologist who studies flower smells and how they attract insects)	**PLANTS** *Structure and function of plants* (Time of the year, leading into interdependence theme)	**LIGHT** (Distance of learning with year 5 light)
Year 4	**LIVING THINGS AND THEIR HABITATS** *Classification* (Diversity of living things and beauty of what is around us) Wangari Maathai (Biologist & Environmental Activist awarded the 2004 Nobel Peace Prize for her contribution to sustainable development)	**ELECTRICITY** *Simple circuits. Conductors and Insulators.* Thomas Edison (Inventor of the lightbulb and power grid) Lewis Howard Latimer (Electronic Engineer who improved the design of Edison's light bulb and brought street lighting to the world)	**STATES OF MATTER** *Change of state / water cycle* (Heating water will have consequences) Anders Celsius (Astronomer who invented the degrees Celsius temperature scale)	**ANIMALS INC HUMANS** *Digestive system, food chains* (Where food is coming from) William Beaumont (Surgeon who first observed and studied human digestion as it occurs in the stomach) Washington & Lucius Sheffield (Dentists who invented toothpaste in a tube)	**SOUND** *Vibration, pitch, volume* Aristotle (Philosopher who developed the concept that sound travels through air due to the movement of air particles)	**SOUND** *Vibration, pitch, volume* Aristotle (Philosopher who developed the concept that sound travels through air due to the movement of air particles)

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UKS2 KQ.	Can I appreciate different perspectives on Global issues?	Can I understand the power of the media?	Am I motivated to assist equality?	Can one person make a difference?	Do I understand that the world is a global community and what it means to be a global citizen?	How do I become the person I want to be?
Year 5	**ANIMALS INC HUMANS** *Humans develop to old age* (different ages of community have different needs - ageing populations globally and ethics) Virginia Apgar (Doctor & Medical Researcher who developed a method of evaluating the well-being of new-born babies)	**LIVING THINGS AND THEIR HABITATS** *Life cycles and reproduction* Scientists, David Attenborough and Jane Goodall.	**FORCES** *Gravity, frictions and ways to enhance the effect of forces.* (Link to theory of gravity - one person) Scientists, Archimedes (Mathematician who developed theories about how levers and pulleys can lift and move heavy objects) George Cayley (Aeronautical Engineer who designed the first successful glider to carry a human being) Brahmagupta (Mathematician & Astronomer who was the first scientist to talk about gravity)	**FORCES** *Gravity, frictions and ways to enhance the effect of forces.* (Link to theory of gravity - one person) Scientists, Archimedes (Mathematician who developed theories about how levers and pulleys can lift and move heavy objects) George Cayley (Aeronautical Engineer who designed the first successful glider to carry a human being) Brahmagupta (Mathematician & Astronomer who was the first scientist to talk about gravity)	**PROPERTIES AND CHANGES OF MATERIALS** (Last chemistry unit, distance to KS3) Scientists, Spencer Silver and Ruth Benerito Jamie Garcia (Chemist who discovered a fully recyclable plastic)	**LIGHT** (Distance of learning with with Year 3 and KS3) Euclid (Mathematician who predicted that light travels in straight lines and we only see things that light falls on) Ibn al-Haytham (Alhazen) (Physicist & Mathematician who developed a theory that light travels in a straight line, and proved it by carrying out the first scientific experiment)
Year 6	**ELECTRICITY** (Connect with Global Issue of Electricity not available to all, Also in Term 1 to be close with year 4) Alessandro Volta (Physicist who developed the electric battery)	**LIVING THINGS AND THEIR HABITATS** *Classification* *Agnes Arber* *(Botanist and first woman to become a fellow of the Royal Society who studied aquatic flowering plants and monocots, a group of flowering plants)*	**EVOLUTION AND INHERITANCE** (inherit genetics but we can choose to make everyone equals) Scientists, Charles Darwin and Alfred Wallace Nettie Stevens (Geneticist who concluded that sex is inherited as a chromosomal factor and that males determine the gender of offspring)	**EARTH AND SPACE** (Connect with Neil Arnstrong - one person?Moved from Year 5 NC to build on Forces) Scientists, Galileo Galilei, Ptolemy, Alhazen and Copernicus Margaret Hamilton (Computer Scientist who was responsible for the software that allowed astronauts Neil Armstrong and Buzz Aldrin to land on the Moon) Steven Hawking Katherine Johnson	**ANIMALS INC HUMANS** Circulatory system, diet/lifestyle, water transported (Impact of one's actions on self and others. Blood / bone marrow donors) William Harvey (Doctor who discovered the nature of blood circulation and the function of the heart as a pump) Richard Doll (Doctor who proved the link between lung cancer and smoking)	**CONSOLIDATION OF UPPER KS2**

BIOLOGY OVERVIEW

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YEAR	TOPIC	TOPIC	TOPIC	TOPIC
NUR	Talk about what they see, using a wide vocabulary Understand the key features of the life cycle of a plant and an animal	Plant seeds and care for growing plants.	Begin to understand the need to respect and care for the natural environment and all living things	
REC	Understand the effects of changing seasons on the natural world around them e.g. how animals and plants may change or behave differently Explore the natural world around them (including plants and animals)	Understand the effects of changing seasons on the natural world around them e.g. how animals and plants may change or behave differently Describe what they see, hear and feel whilst outside (including plants and animals)	Understand the effects of changing seasons on the natural world around them e.g. how animals and plants may change or behave differently Recognise some environments that are different from the one in which they live	
YEAR 1	PLANTS	ANIMALS INC HUMANS		
YEAR 2	PLANTS	ANIMALS INC HUMANS	LIVING THINGS AND THEIR HABITATS	
YEAR 3	PLANTS	ANIMALS INC HUMANS		
YEAR 4		ANIMALS INC HUMANS	LIVING THINGS AND THEIR HABITATS	
YEAR 5		ANIMALS INC HUMANS	LIVING THINGS AND THEIR HABITATS	
YEAR 6		ANIMALS INC HUMANS	LIVING THINGS AND THEIR HABITATS	EVOLUTION AND INHERITANCE

CHEMISTRY OVERVIEW

YEAR	TOPIC	TOPIC	TOPIC
NUR	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		
REC	Explore the natural world around them		

	Describe what they see, hear and feel while outside		
YEAR 1	EVERYDAY MATERIALS		
YEAR 2	USES OF EVERYDAY MATERIALS		
YEAR 3		ROCKS	
YEAR 4	STATES OF MATTER		
YEAR 5	PROPERTIES AND CHANGES OF MATERIALS		
YEAR 6			

PHYSICS OVERVIEW

YEAR	TOPIC	TOPIC	TOPIC	TOPIC	TOPIC	TOPIC
NUR	Explore and talk about different forces they can feel Explore how things work					
REC						
YEAR 1	SEASONAL CHANGES					
YEAR 2						
YEAR 3		LIGHT	FORCES AND MAGNETS			
YEAR 4				SOUND	ELECTRICITY	
YEAR 5		LIGHT	FORCES			
YEAR 6			EARTH AND SPACE		ELECTRICITY	