

Science Long Term Plan

physics

biology

chemistry

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	Describe the weather To identify falling leaves, acorns, fir cones and conkers To name some body parts and talk about the difference in skin, hair and eye colour.	To learn that some animals are awake at night- owls. Bird body parts- 2 legs, wings, beak To explore how some things change if they get hotter or colder.	To name some animals that are kept as pets To know that washing our hands and cleaning our teeth keep us healthy	Understanding growth and change. To name some farm animals To name baby animals- chick, kitten, puppy, piglet and match to the adult. To describe the life cycle of a chicken- egg, chick, chicken	To spot and name some plants and know that they grow from the ground. To spot and name a tree and flower. To name some fruits and vegetables..	To name some sea creatures To name some minibeasts To be able to talk about where different creatures live- habitats.
Reception	Seasonal changes- Autumn- bulbs Natural materials Ourselves- Differences	Seasonal changes- Winter Hot and cold Light and dark The night sky	Materials and their properties/ Changing materials	Seasonal changes- Spring New life Animals and life cycles- frog, caterpillar.	Plants/ seeds and life cycles Fruit and vegetables Healthy eating	Seasonal changes- Summer Forces- push/ pull, sink/ float Minibeasts
Key Stage 1 Cycle A	Forces and space: Seasonal Changes 4 seasons and weather associated with each. Seasons effecting trees, daylight hours and clothing choices.		Animals including humans: Sensitive bodies Name body parts and those linked to our senses. Miller Hutchinson- First hearing aid	Animals including humans: Comparing animals Group animals based on similarities, differences, characteristics and physical features. Jane Goodall- animal behaviourist	Living things: Habitats Identify things that are alive, were once alive and has never been alive. Name plants and animals in a range of habitats. Food chains. Living things: Microhabitats What do minibeasts need to survive?	
Key Stage 1 Cycle B	Everyday Materials Identifying and naming objects and materials they are made from.	Uses of everyday Materials Recognising that materials are suitable for specific purposes. Changing the shape of materials. Charles Mackintosh- waterproofing	Plants: Introduction to plants Identify, name, label common garden and wild plants, deciduous and evergreen trees.	Plants: Plant growth How plants grow and stay healthy. Seed germination.	Animals including humans: Life cycles and health Identify and describe stages of animal life cycles, including humans. Growth and keeping healthy. Florence Nightingale	
Lower Key Stage 2 Cycle A	Forces and space: Forces and Magnets Investigating motion on different surfaces. Friction and magnets.	Animals including humans: Movement and nutrition The human skeleton, bones and movement. Balanced diet Marie Curie- xray machine.	Materials: Rocks and soil Observing appearance and physical properties of rocks. Fossils. Mary Anning- fossils	Energy: Light and shadows Identify light sources, investigate reflection and shadows.	Plants: Plant reproduction Life cycle and reproduction of a flowering plant Kelsey Byers- flowers attracting insects	
Lower Key Stage 2 Cycle B	Energy: Electricity and circuits Appliances that use electricity, build circuits. Conductors and insulators. Thomas Edison- Lightbulb	Energy: Sound and vibrations Exploring different ways of producing sounds. Vibrations, pitch, volume Aristotle- How sound travels	Materials: States of matter Solids, liquids, gases, temperature, water cycle	Animals including humans: Digestion and food Digestive system, teeth, diet, food chains	Animals: Classification and changing habitats Different ways living things can be grouped and make classification keys. Ways habitats change over time. Rachel Carson- environmental pollution	
Upper Key Stage 2 Cycle A	Energy: Circuits, batteries and switches Circuit diagrams, current, resistance, switches, battery types	Energy: Light and reflection Seeing things, reflection, straight lines, shadows Percy Shaw- Cat's eye	Animals including humans: Circulation and health Role of heart, blood and blood vessels. Healthy lifestyles.	Living things: Classifying big and small Broaden knowledge of vertebrates, invertebrates, plants and micro-organisms. Carl Linnaeus- classification	Living things: Evolution and inheritance Fossils, offspring, adaption and evolution Charles Darwin/ Alfred Wallace- natural selection	
Upper Key Stage 2 Cycle B	Materials: Mixtures and separation Explore different types of mixtures and ways to separate them- dissolve, evaporate Materials: Properties and changes Hardness, transparency and conductivity. Reversible and irreversible changes		Forces and space: Earth and Space Earth's rotation, moon, sun and solar system Galileo- First telescope	Forces and space: Unbalanced forces Contact and non- contact forces- gravity, friction, air and water resistance Isaac Newton- Gravity	Living things and their habitats: Life cycles and reproduction Comparing life cycles of plants and animals David Attenborough	

		Neil Armstrong/ Valentina Tereshlova/Mae Jemison		
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Links across the key stages

<u>Animals, including humans</u> Reception KS1 Year A and B LKS2 Year A and B UKS2 Year A	<u>Plants</u> Reception KS1 Year B LKS2 Year A	<u>Living things and their habitats/ Evolution and inheritance</u> Reception KS1 Year A LKS2 Year B UKS2 Year A and B
<u>Seasonal Changes</u> Reception KS1 Year A	<u>Materials</u> Reception KS1 Year B LKS2 Year A and B UKS2 Year B	<u>Electricity, light and sound</u> Reception LKS2 Year A and B UKS2 Year A
<u>Forces</u> Reception LKS2 Year A UKS2 Year B	<u>Earth and space</u> Reception UKS2 Year B	