Science Long Term Plan

physics
biology
chemistry

LDST
Liverpool Diocesan Schools Trust

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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.	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, reststance, 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 Neil Armstrong/ Valentia Tereshlova/Mae Jemison	**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	

Links across the key stages

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