



St Michael's Primary School

Science: long term planning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	What can I tell you about me?	What colours do we see during autumn?	What can I find out about winter?  John Dalton (1766–1844) British scientist who studied weather.	What new life do we see during spring?	What is a life cycle?  Maria Sibylla Merian (1647–1717) One of the first people to study and draw insects, especially caterpillars and butterflies, showing how they change.	
Reception	How do our bodies change?	What is the difference between light and dark?	How is weather different in polar regions?  Robert Falcon Scott (1868–1912) British explorer who led expeditions to the South Pole.		What are mini-beasts, and where do they live?  Jean Henri Fabre (1823–1915) Studied insect behaviour, including nest building and hunting.	



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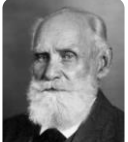
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Year 1	What are the seasons?  Carol Kirkwood (1962-present) Explains daily and seasonal weather to the public using forecasts and data.	What is autumn?	What is winter?	What is spring?	What is summer?	How do the seasons compare?
	What are objects made from and how are they different?  Dr. Mark Miodownik (1969 – present) Materials scientist studying why materials behave differently (hard, soft, shiny, flexible).	How do humans and animals compare?  Steve Backshall (1973-present) Wildlife presenter and naturalist.		What are the parts of a plant, and what do they do?  Beatrix Potter (1866–1943) Observed plants and fungi in the wild and recorded them in drawings.		
Year 2	How can we compare materials, and change the shapes of objects made from them?  Charles Macintosh (1766–1843) Scottish chemist and inventor of waterproof fabric (the “mackintosh” coat).	What do animals and humans need to grow and stay healthy?  Florence Nightingale (1820–1910) Pioneer of modern nursing and hygiene.		 David Attenborough (1926-present) Naturalist and broadcaster who has explored every kind of habitat on Earth.	How do seeds and bulbs grow, and what do they need?  Prof. Joanne Chory (1955-present) American plant biologist who studies how plants grow toward light and how they adapt to temperature and environment.	



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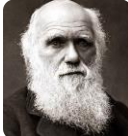
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Year 3	What can rocks, fossils and soil tell us about the Earth?  Mary Anning (1799–1847) British fossil hunter and palaeontologist.	Why do animals need food, and how do their bodies help them move?  Dr. Alice Roberts (1973-present) British anatomist, anthropologist, and TV presenter who specialises in human skeletons and muscles, human evolution, and movement.	How do forces and magnets affect the way things move?  William Gilbert (1544–1603) English physician and natural philosopher known as the “father of magnetism.” First to study the Earth as a giant magnet and systematically investigate attraction and repulsion of magnetic materials.	What is light, how does it help us see, and how are shadows formed?  Thomas Young (1773–1829) English scientist who studied interference of light waves.	Great Science Share	How do the parts of a plant help it grow, reproduce and survive?  Dr. Suzanne Simard (1960-present) Canadian ecologist who discovered that trees communicate and share nutrients via fungal networks (“Wood Wide Web”).
	How do materials change state and affect the water cycle?  Gordon McBean (1960-present) Climatologist studying rainfall and water cycles.	How do sounds happen, travel and change?  Alexander Graham Bell (1847–1922) Inventor of the telephone.	How does electricity flow in a circuit?  Thomas Edison (1847–1931) Inventor of the practical light bulb.	How can be group living things and what impact do changes to their habitats have?  John Ray (1627–1705) English naturalist who classified plants and animals before Linnaeus.	Great Science Share	How do animals, including humans, digest food and depend on each other in food chains?  Ivan Pavlov (1849–1936) Russian physiologist and Nobel Prize winner. He studied the digestive system in dogs; discovered that stomach juices and salivation are linked to food anticipation.



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Year 5	How do forces and simple machines affect the way things move?  Isaac Newton (1642-1727) Formulated the laws of motion and the universal law of gravitation — key to understanding why objects fall to Earth due to gravity.	What are reversible and irreversible changes?  Brian Cox (1968-present) Known for explaining physics concepts (energy, matter, the universe) in an engaging way to the public.	How do the Earth, sun and moon move in relation to one another?  Katherine Joy (1984-present) A modern planetary scientist who studies meteorites and planetary formation; links to understanding Earth, Moon, and other bodies in the solar system.	How do humans change over time?  Aristotle (384–322 BCE) Greek philosopher and early biologist.	Great Science Share	How do animals and plants grow and reproduce?  Jane Goodall (1934-2025) Conducted long-term studies of chimpanzees, focusing on their life cycles, behaviour, reproduction and habitats.
Year 6	How does the circulatory system work, and how do lifestyle choices affect it?  Dr Helen Sharman (1963-present) The first British astronaut and chemist. Her research in space explored how the human body responds to life without gravity.	How and why do we classify living things?  Carl Linnaeus (1707-1778) Developed the classification system that we use today.	How can the components of a circuit affect the way it works?  Michael Faraday (1791-1867) Foundational in electromagnetism and electrical circuits.	What do fossils and adaptations tell us about evolution?  Charles Darwin (1809-1882) Developed theory of evolution by natural selection.	Great Science Share	How does light travel for us to see objects and shadows?  Katherine Burr Blodgett (1898 – 1979) First woman to earn a PhD in physics from Cambridge. She invented non-reflective glass, used in glasses, camera lenses, and screens today.