MARYPORT CHURCH OF ENGLAND PRIMARY SCHOOL
SCIENTIST LINKED TO SCIENCE TOPICS

*Teachers have the freedom to choose which scientist(s) they study for each topic from the overview below. Teachers are not limited to one choice per topic.

EYFS

Timothy (Tim) Peake- a British astronaut who became famous when he spent six months living and working on the International Space Station (ISS) in 2015/16. He was the first British astronaut to board the ISS, a laboratory 400 kilometres from Earth.

Mae Jemison- the first African American woman to become an astronaut. She was a part of the crew of the space shuttle Endeavour, which orbited Earth for more than a week in 1992.

Stephen Backshall MBE-an English naturalist, wildlife presenter, writer and adventurer.

Year 1

Animals, including humans	Everyday materials	Plants	Seasonal Changes	
• Linda Buck-American Biologist who discovered the odorant receptors in their noses. This means they can smell over 10,000 different smells. She won the Nobel Prize in 2004	• Ole Kirk Christiansen- invented Lego.	• Sir Joseph Banks- a particular type of scientist known as a 'botanist,' one who studies plants. He was also an explorer and travelled with Captain Cook. He also advised George III when setting up the Royal Gardens at Kew	• John Dalton- a British weather pioneer. Much of what Dalton did with his meteorological instruments helped to turn the forecasting of weather into actual science.	

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• Carl Hagenbeck- invented the first zoo with open animal enclosures.				
Year2				
Animals, including humans • Elizabeth Garrett Anderson -Britain's first female doctor.	**Living things and their habitats** • Rachel Carson- discovered the dangers of chemical pollution in the ocean (linked to ocean habitats).	**Plants** • Jane Colden-famous for her manuscript without a title, in which she describes the flora of the New York area, and draws ink drawings of 340 different species of them.	**Living things and their habitats- Minibeasts** • Chris Packham- an English naturalist, nature photographer, television presenter and author, best known for his television work including Autumnwatch, Springwatch and the CBBC children's nature series The Really Wild Show.	**Use of Everyday Materials** • Leo Hendrik Baekeland- invented Bakelite, the first fully synthetic plastic, meaning it contained no molecules found in nature.

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Year 3				
Rocks	**Forces and Magnets**	**Animals, including humans – food and skeleton**	**Light**	**Helping Plants to Grow Well**
• Mary Anning-remembered as being one of the greatest fossil hunters to ever live. • Robert H. Bakker –American paleontologist and writer, who developed modern ideas about dinosaurs. • William Smith- an English geologist, who created the first nationwide geological map.	• Isaac Newton-discovered gravity when an apple fell from a tree and (as legend has it) hit him on the head. • Michael Faraday -a Victorian chemist and physicist who invented the electric motor. His most important work was his invention of the electric motor in 1821. He also worked on magnetism, and later discovered how to make electromagnets, which are used in electric generators.	• Marie Curie- a Polish scientist whose ground breaking research on radioactivity won her two Nobel Prizes, and led to a revolutionary new treatment for cancer. During the First World War, Marie also developed mobile X-ray units that she drove to field hospitals, to find the fractures, bullets and shrapnel in soldiers' wounds. The trucks were known as 'petites Curies' (little Curies).	• Archimedes- Known for having interest in the reflection of light in mirrors, and how it could change based on the curves of the mirror. • Abu Ali al-Hasan (Alhazen)- was a physicist and mathematician, with a specialism in optics and light	• Jeanne Baret- the first woman to sail around the world and introduced around 70 plants to Europe. • Tom Hart Dyke- a modern horticulturalists who was kidnapped in South America while collecting a rare orchid. • David Douglass- was a botanist who gave his name to the Douglas Fir.

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Year 4				
Animals, Including Humans – digestion/teeth and food chains	**Electricity**	**States of matter including solids, liquids and gases and the Water Cycle**	**All living things – Habitats/classification**	**Sound**
• Charles Elton -Studied animal ecology (ecology is the branch of biology that deals with the relations of organisms to one another and to their physical surroundings).	• Nikola Tesla- best known for his work with electricity, including the design of alternating current (AC) electricity. • Thomas Edison- invented the light bulb. • Lewis Howard Latimer- an inventor and draftsman best known for his contributions to the patenting of the light bulb and the telephone. • Benjamin Franklin- Showed that lightning is caused by electricity	• Alfred Barnhard Nobel- Nobel was a Swedish inventor, chemist and weapons developer. He is best known for the invention of dynamite. • Norbert Rillieux- was an American-French inventor who was widely considered one of the earliest chemical engineers and noted for his pioneering invention of the multiple-effect evaporator. This invention was an important development in the growth of the sugar industry.	• Jacques Cousteau- a French naval officer, explorer, ecologist, filmmaker, scientist, photographer and researcher who studied the sea and all forms of life in water. He co-developed the aqua-lung, pioneered marine conservation and was a member of the Académie française.	• Alexander Graham Bell Inventor of the first practical telephone • Thomas Edison Inventor of the phonograph (a device for the mechanical recording and reproduction of sound). • Emile Berliner Inventor of the disc record gramophone • Guglielmo Marconi Inventor of the first wireless telegraph • Robert Boyle Described how molecules move • Ernst Mach Described how shock waves are formed

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		• Joseph Priestley- made a key discovery when he isolated oxygen, a gas he called dephlogisticated air, in keeping with the theory of that time that a mysterious substance called phlogiston was in all substances. • Albert Einstein- discovered new ways to work out the size of molecules and explained how particles move. • Lord Kelvin- best known for discovering that -270 degrees celcius is the lowest possible temperature in the universe. It is the temperature at which everything, including the tiniest of particles, freezes.		• Heinrich Hertz The unit of frequency used for all kinds of waves and vibrations is named after him

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Year 5				
Properties of everyday materials -changing state - Reversible / Irreversible changes • Stephanie Kwolek- a chemist who invented Kevlar when working on a project to find a strong but lightweight material to help reinforce car tyres. This was to try and help improve cars' efficiency in terms of the number of miles to the gallon. The Kevlar plastic that Stephanie Kwolek developed turned out to be perfect for tyres but also for a variety of other uses, including for bulletproof vests and other safety equipment such as firefighters' boots and cut-proof gloves for chefs.	**Earth and Space** • Nicolaus Copernicus- an early astronomer, scientist and priest in Poland, thought the sun was at the centre of the solar system. • Katie Bouman. recently celebrated for playing a major role in capturing the first ever image of a black hole • William and Caroline Herschel- the Herschels were pioneers of the systematic classification and investigation of the heavens. William Herschel was one of the first 'professional' astronomers, and discovered infrared radiation. His sister Caroline helped him to	**All Living things -Life cycle of plants and animals** • Jane Goodall- a British primatologist and anthropologist. Considered to be the world's foremost expert on chimpanzees, Goodall is best known for her over 55-year study of social and family interactions of wild chimpanzees since she first went to Gombe Stream National Park, Tanzania in 1960. • George Washington Carver- an African-American agricultural scientist and inventor. He actively promoted alternative crops to cotton and methods to prevent	**Forces** • Galileo Galilei- worked on a variety of experiments, including the speed at which different objects fall, mechanics and pendulums.	**Animals, including humans – changes from birth to old age.** • Sir David Attenborough- British naturalist and television personality, world-famous for writing, presenting and producing award-winning wildlife documentaries. • Ernest Everett Just- a biologist and educator who pioneered many areas on the physiology of development, including fertilization, experimental parthenogenesis, hydration, cell division, dehydration in living cells and ultraviolet carcinogenic radiation effects on cells.

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Kevlar is a synthetic plastic material that is five times stronger than the same weight of steel. The molecules in the plastic form very strong bonds and arrange themselves in a tight structure. The strong but light plastic is spun into long fibres which are then woven together to make an even stronger finished product.	develop the modern mathematical approach to astronomy. • Jonannes Kepler- the first person who explained the motion of the planets of our solar system completely. His first law of planetary motion states that planets travel in ellipses. Like Nicolaus Copernicus, Kepler also believed in heliocentric solar system. Johannes Kepler also explained how the moon influenced tides. • Dr. Stephen Hawking- studied the laws of physics that make up the universe. He wanted to understand how the universe was formed, how it works, and explain its creation and evolution.	soil depletion. While a professor at Tuskegee Institute, Carver developed techniques to improve soils depleted by repeated plantings of cotton.		

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	• Zang Heng- a Chinese astronomer and inventor. He was the chief astronomer in the court of the Chinese Emperor and mapped the stars and planets. He correctly recognized that the moon was not a light source, but reflected the light of the Sun, a controversial suggestion at the times. • Katherine Johnson- in her career, she was called a "computer." She helped NASA put an astronaut into orbit around Earth. And then she helped put a man on the Moon. • Neil deGrasse Tyson- an American astrophysicist, cosmologist, planetary			

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	scientist, author, and science communicator.			
Year 6				
All living things- classification including micro-organisms • Carl Linnaeus-helped to develop crucial theories on biodiversity and the classification of plants and animals. This system, called the 'binomial system', where the genus of a species is named and followed by a specific species type, is still used by people today. • Edward Jenner-discovered how to vaccinate people against smallpox. • Dr Joseph Lister- the pioneer of antiseptic surgery.	**Electricity** • Charles Augustin-Coulomb Invented instruments to measure forces between charges. • Otis Frank Boykin- an American inventor and engineer. His inventions include improved electrical resistors used in computing, missile guidance, and pacemakers. • Alessandro Volta- Invented the first battery • Andre Marie Ampere- Measured the amount of current flowing in a circuit.	**Animal including Humans – circulation, heart, blood vessels and impact of diet, exercise and drugs.** • Dr Daniel Hale Williams- performed the first open-heart surgery. • Charles Drew- a doctor and scientist in the early 1900s. His work on blood storage and blood banks helped to save thousands of lives during World War II.	**SATs Revision** **Light** • Albert Einstein- His theory of the photoelectric effect won him a Nobel Prize. The photoelectric effect (light matter interaction) is the emission of electrons or other free carriers when electromagnetic radiation, like light, hits a material. Electrons emitted in this manner can be called photoelectrons. • James Clerk Maxwell- most famous for his theory of electromagnetism, which showed that light was electromagnetic radiation. His theory is considered to	**Evolution and inheritance. Living things change and reproduce. Adaptation** • Charles Robert Darwin- the biggest name in Victorian science. Darwin was an English naturalist who is famous for his work on the theory of evolution. • Alfred Wallace- in 1848 Wallace was collecting butterflies, insects and birds in Brazil, when he noticed variations in species depending on their living conditions. • Gregor Mendel- considered the father of the science of genetics. Through

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• Louis Pasteur - Discovered pasteurization, vaccines, and founded the science of germ theory. • Sir Alexander Fleming- discovered penicillin in 1928, which kills some bacteria responsible for serious human infections. • Robert Hooke- famously discovered the Law of Elasticity (or Hooke's Law) and did a huge amount of work on microbiology (he published a famous book called Micrographia, which included sketches of various natural things under a microscope).			have paved the way for both quantum mechanics and Einstein's theory of special relativity.	experimentation he found that certain traits were inherited following specific patterns. Gregor studied inheritance by experimenting with peas in his garden. • Francis Crick and James Watson - Discovered the structure of the DNA molecule.

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Useful websites:

https://www.bbc.co.uk/teach/class-clips-video/science-ks2-scientists-and-scientific-method/z43mbdm

https://www.bbc.co.uk/teach/class-clips-video/pshe-ks1-ks2-proud-to-be-a-doctor/z7kfbdm -Elizabeth Garrett Anderson and Alexander Flemming.

https://www.dkfindout.com/uk/science/famous-scientists/

https://www.bbc.co.uk/teach/class-clips-video/science-ks2-the-work-of-sir-isaac-newton/zkw3qp3 Isaac Newton

http://www.coreknowledge.org.uk/year1sciencebiographyactivity.php Joseph Banks Y1

https://www.youtube.com/watch?v=aowghaUvP6Q Marie Curie video

https://www.twinkl.co.uk/search Twinkle scientist packs (Y1-Y6 Lots to choose from).