



Belton Primary School

Rolling Programme with

Scientists to study

Use with PSEC Scientists Across the Curriculum

Taken from PSEC – Scientists Across the Curriculum

Research has shown that, while learning science can be interesting and enjoyable, many children find that what they learn at school is abstract and they cannot see how it relates to their own lives. Consequently, they see science as something that is not for them. Studies have shown that these perceptions can start early in a child's primary school career. Children who think or feel this way have low science capital.

One way of increasing children's science capital is for them to learn about scientists that they can identify with. This document is intended to help schools and teachers include scientists in the curriculum who:

- are relevant to the topics
- illustrate how scientific knowledge has developed over time
- children can identify with and whose work they can relate to.

We are trying to ensure that children are introduced to a wide range of Scientists:-

- historical figures who illustrate the development of scientific knowledge over time
- scientists from under-represented groups
- modern scientists whose work is relevant to children and who reflect their world and backgrounds.

Belton Primary School Two Year Rolling Programme for Science

Biology Chemistry Physics

Cycle A

Term	Year 1 and 2	Year 3 and 4	Year 5 and 6
Autumn 1	<p>Growth</p> <p>Animals incl. humans</p>	<p>Light</p>	<p>Studying Living Things</p> <p>Living things and their habitats (5)</p>
	<p>Louis Pasteur—developed the first vaccines</p> <p>Katalin Kariko—Covid vaccine development</p> <p>Leonardo Da Vinci - Anatomical Man</p>	<p>Percy Shaw (Inventor of the cat's eye)</p> <p>Nicky Fox—Nasa scientist who studies the sun.</p>	<p>Roger Arliner Young - search document for information (Zoologist who studied reproduction in marine organisms)</p> <p>David Attenborough - links to free resources requiring a login (Naturalist & TV Presenter)</p>
Autumn 2	<p>Exploring everyday materials</p> <p>Everyday materials</p>	<p>Skeletons & Food</p> <p>Animals incl. Humans</p>	<p>Light</p>
	<p>Charles Macintosh—Raincoat and waterproof materials</p> <p>Zach Johnson—Clothes made from recycled plastic bottles found in the ocean</p>	<p>Wilhelm Roentgen (Physicist who discovered x-rays)</p> <p>Marie Curie (Physicist who invented the first mobile x-ray machine to treat soldiers wounded on the battlefield in WWI)</p>	<p>Euclid - search document for information (Mathematician who predicted that light travels in straight lines and we only see things that light falls on)</p> <p>Ibn al-Haytham (Alhazen) (Physicist & Mathematician who developed a theory that light travels in a straight line, and proved it by</p>

			carrying out the first scientific experiment)
Spring 1	Exploring everyday materials 2 - Materials	Plants	Evolution and Inheritance
	<p>Chester Greenwood - Inventor of Earmuffs</p> <p>Becky Schroeder (Inventor of Glo-sheets which she patented as a 12-year-old)</p>	<p>Jagadish Chandra Bose - search document for information (Biophysicist who measured plant response to different stimuli)</p> <p>George Washington Carver- (Agricultural Scientist who encouraged the planting of different crops to prevent soil degradation)</p> <p>Dr Kelsey Byers (Biologist who studies flower smells and how they attract insects)</p>	<p>***Charles Darwin—Biologist known for contributions to the science of evolution.</p> <p>Alfred Russell Wallace - science of evolution</p> <p>Nettie Stevens - search document for information (Geneticist who concluded that sex is inherited as a chromosomal factor and that males determine the gender of offspring)</p> <p>Emma Dunne (Palaeobiologist who investigates how ancient climate change affected the evolution of different species)</p>
Spring 2	Plants - Yr 1	Forces & Magnets	Changes of materials
	<p>Maria Sibylla Merian (German artist, scientific illustrator, and naturalist)</p> <p>Marie Clark Taylor—a botanist who studied the</p>	<p>William Gilbert (Doctor who developed the theory of magnetism)</p> <p>Leonardo Da Vinci - search document for</p>	<p>Spencer Silver Inventor of Post-it® Notes</p> <p>Raquel Prado (Chemist who develops a</p>

	<p>effects of light on plant growth</p> <p>Suzanne Simard— professor of forest ecology</p>	<p>information (First person to plan and carry out tests on friction)</p> <p>Eric Laithwaite (Electrical Engineer who developed the technology behind the Maglev train)</p>	<p>sustainable fabric that looks like leather but comes from pineapple leaves that would otherwise be burnt)</p>
Summer 1	<p>Life Cycles Animals incl. humans</p>	<p>Classifying Living Things and Their Habitats</p>	<p>Forces</p>
	<p>Dawood Qureshi (Marine Biologist who studies wildlife in the ocean)</p>	<p>Wangari Maathai - search document for information (Biologist & Environmental Activist awarded the 2004 Nobel Peace Prize for her contribution to sustainable development)</p> <p>Kelsey Archer Barnhill (Deep Sea Ecologist who sends robots to the seafloor to collect samples of different animals to study)</p>	<p>Galileo Galilei - links to free resources requiring a login (Astronomer, Mathematician & Physicist who was the first person to use the scientific method to test theories about gravity and the Solar System)</p> <p>Brahmagupta - search document for information (Mathematician & Astronomer who was the first scientist to talk about gravity)</p>
Summer 2	<p>Living Things and Their Habitats</p>	<p>Electricity</p>	<p>Blood + Transportation Heart Health Animals, including humans</p> <p>Also puberty sessions for yr 5/ 6 separately</p>
	<p>Evelyn Cheesman— Entomologist and curator of insects</p>	<p>William Kamkwamba - search document for information</p>	<p>William Harvey (Doctor who discovered the nature of blood circulation)</p>

	<p>Dr Alexandra Harmon Threatt-Entomologist and bee expert</p> <p>William Kirby (Father of modern entomology, the study of insects)</p>	<p>(Inventor who used wind turbines to bring electricity to his village in Malawi)</p> <p>Thomas Edison (Inventor of the lightbulb and power grid)</p>	<p>and the function of the heart as a pump)</p> <p>Ruth Ella Moore - search document for information (Bacteriologist who researched immunology, blood groups and tuberculosis)</p>
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Cycle B

Term	Year 1 and 2	Year 3 and 4	Year 5 and 6
Autumn 1	About Animals Animals, including humans	States of Matter	Properties of materials
	<p>Tanesha Allen (Zoologist who studies badgers)</p> <p>Joan Beauchamp Procter - search document for information (Herpetologist and Curator of Reptiles, London Zoo)</p>	<p>Ruth Benerito (Chemist who developed wrinkle-free cotton fabric)</p> <p>Raquel Prado (Chemist who develops a sustainable fabric that looks like leather but comes from pineapple leaves that would otherwise be burnt)</p>	<p>Spencer Silver Inventor of Post-it® Notes</p> <p>Walter Lincoln Hawkins— Engineering and uses of plastics</p> <p>Joe Keddie- Professor Keddie is interested in fundamental processes in soft matter, especially polymer thin films and nanoparticles.</p>
Autumn 2	Seasonal changes	Food & Digestion Animals, including humans	Living Things and their habitats (6)
	<p>Jim Cantore (Meteorologist and storm tracker)</p>	<p>William Beaumont (Surgeon who first observed and studied human digestion as it occurs in the stomach)</p>	<p>Carl Linnaeus (Botanist & Zoologist who developed a taxonomy for classifying organisms)</p>

		Washington & Lucius Sheffield (Dentists who invented toothpaste in a tube)	Hu Xiansu - search document for information (Botanist and founder of plant taxonomy in China)
Spring 1	All About Me Animals incl. humans	Nature and the Environment Living Things & Their Habitats	Electricity
	Miller Hutchinson - search document for information (Engineer who invented the first electric hearing aid)	Rachel Carson (Aquatic Biologist who wrote about environmental pollution) Wangari Maathai - search document for information (Biologist & Environmental Activist awarded the 2004 Nobel Peace Prize for her contribution to sustainable development)	Nicholas Tesla and Thomas Edison - battled over completing electric power transmission systems (a/c and d/c) and developed the electric light bulb Mildred S Dresselhaus (Materials Scientist whose research led to the development of the rechargeable batteries in all modern electronic equipment)
Spring 2	Plants - year 2 Plants	Sound	Looking after the environment
	Daniel Solander (Botanist who worked with Joseph Banks on Captain Cook's voyage around the World) Poppy Okotcha (Horticulturalist interested in the	Aristotle (Philosopher who developed the concept that sound travels through air due to the movement of air particles) Isaac Newton - search document for information	Chris Nelson - Horticulturist Anita Rodick - Body Shop David Attenborough Chris Packham

	connection between healthy environments, healthy food, and healthier people)	Washington & Lucius Sheffield (Dentists who invented toothpaste in a tube)	
Summer 1	Uses of Everyday materials - Year 2	Working Scientifically Unit	Space
	<p>John McAdam—Road surfacing</p> <p>Victoria Callaghan (Develops sustainable packaging for BASF plc)</p>	<p>Look at Scientists in the workplace</p> <p>Eg Forensic Scientists, being a vet etc</p>	<p>Nicolaus Copernicus (Astronomer who developed the theory that the Sun was at the centre of the Solar System around which the planets orbited)</p> <p>Galileo Galilei - search document for information (Astronomer, Mathematician & Physicist who made the first telescope and discovered Neptune and the rings of Saturn)</p> <p>Katherine Johnson - NASA</p> <p>Helen Sharman (Astronaut who was the first British citizen to go into space)</p> <p>Mae Jemison (Astronaut and first Black woman in space)</p>
Summer 2	Habitats from around the World Living Things and their Habitats	Rocks	<p>Lifecycles</p> <p>Living things and their habitats</p> <p>Teach puberty</p>

	Seasonal changes		
	<p>***Evelyn Cheesman— Entomologist and curator of insects</p> <p>***Dr Alexandra Harmon Threatt—Entomologis and bee expert</p> <p>Gordon Buchanan - Wildlife cameraman</p>	<p>William Smith (Engineer & Geologist who developed the science of rock strata)</p> <p>Florence Bascom (Geologist who studied the origin and formation of mountains)</p>	<p>David Attenborough - links to free resources requiring a login (Naturalist & TV Presenter)</p> <p>Jane Goodall (Wildlife Researcher & Conservationist who studied chimpanzees)</p> <p>Virginia Apgar (Doctor & Medical Researcher who developed a method of evaluating the well-being of new-born babies)</p>