



# Wheelers Lane Primary School Curriculum Concepts and Knowledge Journey

## STEM Faculty: Science

The building blocks of learning. Our concepts stem from our whole school curriculum intent and thread through our entire school curriculum.

Strand	Year 5						Year 6					
Focus	Properties and changes of materials (long topic)		Earth and Space	Humans (very short topic) (PSHE link)	Living Things and Their Habitats	Forces (DT – pulleys/ levers/gears)	Humans (PSHE/PE link)	Evolution	Living Things and their habitats (classification)	Light	Electricity (short topic)	
<b>Key Question</b>	Is burning always destructive?	If sugar disappears when added to water, why can we get it back?	Why did people believe the earth was flat?	If you have big feet can you jump further?	What is reproduction?	How does an aeroplane stay in the sky?	Is blood blue?	Is evolution a fact?	Can you have 'good' bacteria?	How does a mirror work?	What is electricity and how can we describe its movement in a circuit?	
<b>Concept 1</b> Heritage (Birmingham)		The Lunar Society John Dunlop							University of Birmingham		Where is electricity generated in Birmingham?	
<b>Concept 2</b> Communication			How do we communicate in space?	Beyond Bionic	The Frozen Planet				The Blue Planet Odd One Out game	Dragons Den Presentation	The Rise and Fall of Static Man podcast	
<b>Concept 3</b> Powerful Stories	Maggie Aderin Pockock Jocelyn Bell Burnell	Itch John Dunlop	Wang Zhengi George's Secret Key to the Universe Galileo	The Queen at 90	The 1000 year old boy	The Tin Snail	Pig Heart Boy Santorio Santorio	Charles Darwin Nettie Stevens One Smart Fish The Molliebird			Hertha Ayrton	
<b>Concept 4</b> Sustainability, Rights and Responsibilities	Discrimination against women scientists	Which materials are recyclable?	Is there pollution in space?	What changes can I make to live more sustainably?	Who is Jane Goodall?	Is travelling by aeroplane good for the environment?	Can I be healthy and look after the planet at the same time?	Is there prejudice in Science?	How do we cause harm to living things?	What effect does light pollution have?	Do we use our planets resources responsibly?	
<b>Concept 5</b> Creativity and Enrichment	Materials trail with QR codes	Growing crystals	My Asteroid is blowing up podcast	Look at worlds oldest people	Design habitat for a made up creature		Heart rate and recovery in PE lesson	Guess teacher from baby photos	10 recently discovered animals	Tim Peake The Worlds Biggest Shadow	Make wind turbines	
<b>Concept 6</b> Me - now and in the future	Listen to podcasts from scientists telling their stories	Ice Ice Baby podcast But Why	Will I visit another planet?	How will I age?	How can I support different world? habitats		How can I keep my heart healthy?	What is my genetic heritage?	How can I protect myself from harmful bacteria and viruses?	How can I protect myself from the sun?	How can I reduce my carbon footprint?	
<b>Subject area 1</b> Investigation 1	Desert island challenge	John Dunlop ball experiment		Fair test on whether reactions change as you get older	I	Make gliders to test best shape	Pulse rate investigation	Beak shape investigation	Mould investigation	Investigate shadows with torches		
<b>Subject area 2</b> Investigation 2	Chemical reactions			Research a significant naturalist or animal behaviourist		Make a space capsule: how can you make it land safely?			What happens if we add too much yeast to bread?	Electrical festival challenge		

Subject area 3						Investigate how to make the best simple lever?						
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