

# Year 4 Indigo Spring 1: Is There Anything Left to Invent?

School Value: Empathy – we can reflect on our actions and behaviour choices and always want to do better

Topic Sticky Knowledge	
Science	Electricity is a type of energy that can build up in one place to flow to another.
	Electricity will flow through a complete circuit with no breaks. If there is a break in the circuit that prevents the electricity from flowing, this is an incomplete circuit and the components will not work.
	A series circuit is a circuit where the components are connected in a loop. Electricity flows through each component in a single pathway.
	Switches can be used to open or close a circuit. When off, a switch 'breaks' the circuit to stop the flow of electricity. When on, a switch 'completes' the circuit and allows the electricity to flow.
	Many everyday appliances rely on electricity for them to work. Some appliances use mains electricity (are plugged into a socket) and others have a battery to make them work. Examples of mains-powered appliances include toasters and televisions. Battery-powered appliances can include mobile phones and torches.
	Metal is used in plugs to allow electricity to flow from the wall socket, through the plug and into the electrical device. The plastic covering stops you getting an electric shock
	To work safely with circuit components in the classroom: None of the equipment needs to use mains power, so do not put any of it in or near plugs. Report any damaged or broken equipment to your teacher. Do not use it. Only use equipment as instructed. Connect equipment correctly. Disconnect equipment after use and put it away neatly.
History	Thomas Edison was a very famous inventor who helped us make the most of electricity from bulbs to fuses.
	Maria Telkes was a famous scientist who made a lot of discoveries around solar power.
	Sir James Dyson is best known as the inventor of the dual cyclone bagless vacuum cleaner.

Topic Vocabulary		
Science	Circuit	An electrical circuit is a path or line through which electrical current flows.
	Insulator	A material or item that does not let electricity pass through it, such as plastic.
	Conductor	A material or item that does let electricity pass through it, such as metal.
	Cells	An electrical cell is a device that is used to generate electricity, like a battery
	Socket	Sockets allow electric equipment to be connected to the alternating current (AC) power supply in buildings and at other sites.
	Appliance	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
Design & Technology	Design Criteria	A set of rules to help designers focus their ideas and test the success of them
	Target Audience	The group of people that a product is aimed at
	Circuit Component	One of the several parts that complete a circuit
	Information Design	Facts that are displayed in a visually appealing way and are easy to understand
History	Achievements	Something very good and difficult that you have succeeded in doing
	Impact	A strong and powerful effect.

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Stand-Alone Sticky Knowledge	
RE	Buddhism started in India over 2,500 years ago. Buddhists follow the teachings of a man called Siddhartha Gautama. He became known as the Buddha, which means 'enlightened'.
	Siddhartha Gautama was a prince who lived a life of luxury. When he was 29, Siddhartha Gautama went outside his palace and saw people suffering for the first time.
	He decided to leave his palace and live among holy men in search of truth. His search took him six years, but he became enlightened while meditating under a fig tree.
	Following this, Siddhartha became known as the Buddha, which means the 'awakened' or 'enlightened' one. From then on, he dedicated his life to spreading his teachings.
	The Tipitaka contains the teachings of the Buddha and his companions, comments on those teachings, as well as rules for monks. Buddhists call the teachings of the Buddha dharma which means 'truth'.
	When entering a temple, Buddhists will take off their shoes, put their hands together and bow to the image of the Buddha. They may also use prayer beads called malas.
	Computers accept input, process this according to a stored program (sequence of instructions) and then produce output.
Computing	Some computers have a fixed program that cannot be easily changed. Things like laptops, tablets and phones are different. They can be much more easily programmed by their user and many different programs can be installed on them.

Stand-Alone Vocabulary		
RE	Buddha	Awakened or enlightened one
	Bodhi	Tree under which Buddha reached enlightenment: known as the tree of wisdom
	Enlightenment	Understanding the world, how it works and the meaning of life.
	Meditation	a set of techniques which help the practitioner focus and train their attention, clear their mind and achieve an emotionally calm state
	Temple	This is where Buddhists go to pray.
Music	Electronic sounds	Music created by a computer or electronic instruments
	Unison	Singing or musical parts happening at the same time
	Rapping	Spoken word singing in time to a tune or beat
Computing	Object Code	a version of the program converted (compiled) into the detailed instructions to be followed by the computer's processor
	Simulator	software allowing one computer system to behave as another; for example, the MakeCode editor includes an on-screen simulator of a micro:bit so that programs can be tested
French	Regardez	Look
	Repetez	Repeat
	Ecoutez	Listen
	Vrai/Faux	True/False