

# Year 3 Blue Spring 1: Are Robots More Intelligent Than Us?

School Value: Empathy - We always show good manners and politeness

Topic Sticky Knowledge	
Science	A force is a push, pull or twist that can make an object start moving, speed up, slow down, stop or change direction.
	Magnets only attract certain types of metals, other materials such as glass, plastic and wood aren't attracted.
	All magnets have two poles, the north pole and the south pole. These poles are in different places depending on the shape of the magnet.
	Magnets are mostly made from iron or alloys of iron (mixtures of iron and other materials). Magnets provide a force which can push or pull over a distance. The stronger the magnet the greater the distance this force can be felt.
	The Earth is a very big magnet. Its North and South poles are highly magnetic.
	Different surfaces create different amounts of friction. The amount of friction created by an object moving over a surface depends on the roughness of the surface or object and the force between them.
History	Leonardo da Vinci was the first person to sketch plans for a 'robot' human in 1495.
	Between 1700 and 1900 a number of life-sized automatons were created including a famous mechanical duck made by Jacques de Vaucanson that could crane its neck, flap its wings and even swallow food.
	In 1932, the first true robot toy was produced in Japan. The 'Lilliput' was a wind-up toy which walked. It was made from tinfoil and stood just 15cm tall.
	The U.S. successfully use the latest in computing, robotic and space technology to land Neil Armstrong on the moon in 1969.
	The first records of robotic surgery performed was in 1985. Specifically, the first surgical robot, PUMA 560, was used in a brain procedure.
D&T	When air enters a balloon attached to a pneumatic, the balloon gets bigger and will open the robot at the pivot. When the air exits, it will close.
	Pneumatics are used in: door openings on buses and trains; air brakes and in drills used in construction.

Topic Vocabulary		
Science	Attract	A pulling force when you bring together two different magnetic poles.
	Repel	A pushing force when you bring together two of the same magnetic poles
	Magnetic Poles	North and south poles are found at different ends of a magnet
	Magnetic Field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards a magnet.
	Force	Pushes or pulls that change the motion of an object.
	Friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
History	Significant	Something that is important and deserves lots of attention.
	Impact	The effect that something has on a situation, process or person. It is usually sudden and powerful.
D&T	Pneumatic	The use of pressurised air for mechanical movement.
	Pivot	The central point, pin, or shaft on which a mechanism turns or swings.
	Linkage	Lengths of material (for example, metal or card) that are joined together by pivots, so that the links can move as part of a mechanism.

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## Stand-Alone Sticky Knowledge

RE	The River Ganges is considered to be sacred and spiritually pure for Hindus although in reality it is not a clean river. Some Hindus believe that it flowed from heaven to purify humans.
	Sometimes the river is represented in female form because many Hindus refer to it as 'mother Gangaa' or 'she'. Many Hindus believe water (known as 'Gangaa jal') from anywhere on the River Ganges is purifying and holy.
	Some Hindus believe that the River Ganges pays its respects to Lord Shiva by the direction in which it flows.
	People enter the Ganges in order to purify themselves. Many pilgrims also take home small containers of water from there to give to friends and family who are not able to attend.
	One of the key places of Hindu pilgrimage is Varanasi, situated on the bank of the holy River Ganges. It is considered to be the home of Shiva one of the principle deities of Hinduism and part of the Trimurti.
	Some Hindus believe that if they die at Varanasi, they might be able to attain moksha sooner. Some Hindus go there when they are close to death in order to die there. Others have their ashes scattered there by relatives.
	In reggae, bass guitar and drums are brought to the foreground of the music and guitar and keyboards set back in the mix. It has a slowish tempo and laid-back feel. The lyrics often have a political message.
Computing	Much of the work, and fun, in programming lies in spotting and correcting mistakes, known as 'bugs'. The process of finding and fixing bugs is called 'debugging'.
	The more complex a program is, the more likely bugs are to occur. Debugging and developing projects is a great way to use logical reasoning to explain how simple algorithms work.

## Stand-Alone Vocabulary

RE	Ganga	The Ganges – the most sacred river in India
	Varanasi	City in the Indian state of Uttar Pradesh, regarded as the spiritual capital of India.
	Brahman	The ultimate reality or all-pervading reality, from which everything emanates
	Pilgrimage	Journey of spiritual significance
	Sacred	Shown great respect
	Reincarnation	The belief that life is a cycle of birth, life, death and rebirth. When a person dies, they are reborn as another living thing. This cycle can go on for thousands of lifetimes.
Music	Backing	The accompaniment to a song.
	Introduction	Music heard at the beginning of a song or piece of music; a section of music that can take us from a verse to a chorus.
Computing	Abstraction	Simplifying things through identifying what is important, and what detail can be hidden or ignored
	Logical Reasoning	To be able to give a reason for something which others would have to accept as correct
	Parallel Processing	When programs run (or appear to run) simultaneously
French	(tres) bien	(very) well/good
	Je joue bien au football	I'm good at playing football
	Je nage bien	I'm a good swimmer.
	Je danse	I'm dancing
	Joyeux anniversaire!	Happy birthday!