

Year 5 Violet Spring 1: How Do Secret Agents Send Messages?

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

Topic Sticky Knowledge	
Science	The word 'material' describes what things are made from. A material's state can be solid, liquid or gas. Materials are made of lots of little particles and how they are arranged determine their state.
	Materials have properties that make them useful for certain jobs, such as being magnetic, flexible, waterproof, etc.
	Irreversible changes, like burning, cannot be undone. Reversible changes, like melting and dissolving, can be changed back again.
	Mixtures can be separated out by methods like filtering and evaporating. A change is called irreversible if it cannot be changed back again.
	Examples of reversible changes. Melting: Melting is when solid converts into a liquid after heating. Example of melting is turning of ice into water. Freezing: Freezing is when a liquid converts into a solid.
	Some changes are irreversible. For example, a cooked egg cannot be changed back to a raw egg again. Burning is another example of an irreversible change.
	Mixing substances can cause an irreversible change. For example, when vinegar and bicarbonate of soda are mixed, the mixture changes and lots of bubbles of carbon dioxide are made.
	Materials that are encountered in the world around us. show signs of wear and tear over time. This may be due to weathering or regular use (or abuse). Organic materials, for example wood, will decompose once the surface seal or varnish is broken, whereas some plastics start to break down and can become brittle.
	Alan Turing was a British mathematician. He made major contributions to the fields of mathematics, computer science, and artificial intelligence.
History	Alan Turing worked for the British government during World War II, when he succeeded in breaking the secret code Germany used to communicate using the enigma machine.
	Positive space is the area in a work of art that are the subjects, or areas of interest.
Art	Negative space is the area around the subjects, or areas of interest.

Topic Vocabulary		
Science	Dissolve	To become broken up or absorbed by something or to disappear into something else.
	Solubility	A chemical property referring to the ability for a given substance to dissolve in a solvent. This makes a solution.
	Saturated	When as much of a substance as possible has been dissolved into a solvent and no more will dissolve.
	Thermal	Something that is thermal is hot, retains heat, or has a warming effect.
	Evaporation	When a liquid turns into a gas because of an increase in temperature of pressure.
	Melting	When a solid turns into a liquid, usually because of a rise in temperature
	Filtering	To filter a substance means to pass it through a device which is designed to remove certain particles contained in it.
	Transparency	Transparency is the quality of being easily seen through.
	History	Legacy
Significance		Evaluating someone or something's impact on life in the past or life today.
Impact		Change that is created by an event or person. This can be a long lasting impact, a small impact, or no impact at all.
Art	Technique	A way of carrying out a particular task
	Relief Printing	When you carve into a printing block that you then use to press onto paper and make a print.

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Stand-Alone Sticky Knowledge	
RE	Sikh stories are several hundreds of years old. Many are still important to Sikhs today; they include examples of how to behave and were told by the Gurus which means they are significant.
	The tenth guru, Guru Gobind Singh, said he would be the last living Guru and so after him Sikhs should look to their holy book for guidance.
	The Guru Granth Sahib is the name of the Sikh Holy Book and is treated as the living Guru of the Sikhs.
	It is protected under a special canopy in the Gurdwara and is covered with special cloths called the rumalla when it is not in use.
	When in presence of the holy book, Sikhs take their shoes off and never turn their back on the scriptures.
	During festivals, the holy scriptures are read continuously from beginning to end which takes about 48 hours. During these readings, a chauri (ceremonial whisk) is waved over the scriptures as a sign of respect for the living Guru.
Music	A pop ballad is a gentle love song, full of emotion. They can sometimes have a rock backing, which then becomes a power ballad.
	The style indicators of a pop ballad are: slow and gentle backing; instruments like strings, piano and acoustic guitar; subtle drums and bass; lyrics about love or celebrating love, and the mood of the words and music match each other.
Computing	Cryptography is the study of the hidden or secret transmission of messages and of how such encrypted messages can be decrypted by others.
	In traditional cryptography, encryption relies on an agreed system and a secret key known only to the transmitter and the recipient of the message. The transmitter encrypts the message using the system and the key, transmits the encrypted message to their recipient who decrypts it with the key using the agreed system.
	Anyone eavesdropping on a message cannot decrypt the message as they don't know the key, although it's possible that they could guess this, using clues or just by trying all the possible keys.

Stand-Alone Vocabulary		
RE	Guru	Teacher: used in Sikhism to refer to the ten human gurus and the Guru Granth Sahib.
	Guru Granth Sahib	The Sikh holy book
	Guru Nanak	The first Guru and the founder of the Sikh faith.
	Khalsa	'The community of the pure' – the initiated Sikh community
Music	Ballad	A gentle love song.
	Interlude	A passage of music played between the main themes
	Tag Ending	Usually a short ending, tagged onto the main part of the song.
Computing	Cipher	An agreed scheme (algorithm) for encrypting or decrypting a message
	Cryptography	The science of keeping communication and information secret
	Encode	To change the form of a message into an agreed code.
	Semaphore	A code for converting letters and numbers into different positions of two flags
	Morse Code	A simple code for converting letters and numbers into patterns of short and long electrical pulses
French	Je vais à l'école à huit heures et demie	I go to school at half past eight
	À droite	On the right
	À gauche	On the left
	Tout droite	Straight ahead