Lesson Plan

Teacher	[AA]	**Date**	00/00/00	**Period**	0	**Class**	9AA
No. pupils	00	**SEN**	0	**G&T**	0		

Project title   Cryptography

Context of project   During this unit, pupils will learn about the use and purpose of cryptography and encryption of data. They will learn about the purpose and use of cryptography in everyday society and understand how the use of computers has enabled ever more secure and sophisticated methods of cryptography to be developed.

Lesson No.   Lesson 1

Learning Objectives   To understand the term 'cryptography'

To be able to identify two of the earliest methods of encrypting messages

To be able to create their own cipher code

Learning Outcomes   *All pupils will:* be able to decrypt at least one hieroglyphic message and one Caesar cipher message

Most pupils will: be able to confidently decrypt and encrypt messages using ciphers

Some pupls will: develop a logical, original cipher code of their own and use the code to write an encrypted message

Key Terms   cryptography, decrypt, Caesar cipher, codes

Starter	Follow the instructions on the 'hot cold starter.doc'	10 mins
Main activity	Teacher led discussion Ask the class whether they have heard of the term 'cryptography' and whether they know what it means. Display 'cryptogrphy.ppt' on the board and go through slides 1-5 Hand out a copy of 'hieroglyph code.pdf' to pupils. Display slide 6 and ask them to decrypt the message.	5 mins
	Individual pupil task Hand out a copy of 'hieroglyph decryption task.pdf' to each student. They should work through the codes to decrypt the messages. Check the first two answers with pupils.	5 mins
	Teacher led discussion Go through slides 7-12 with students	5 mins
		10

	Individual task Hand out a copy of 'caesar cipher task' to each student. They should aim to crack the two messages and then write one of their own. They should give their message to another student to crack.	mins
	Paired discussion Display slide 13 on the board. In pairs, pupils should answer the questions. Take feedback and display slides 14 and 15.	5 mins
	Teacher led discussion Ask students how they could design a different Caesar cipher Answer: shift the letters by a different amount to 3	2 mins
	Paired task Hand out a copy of 'new cipher code task.doc' to pairs of pupils. In pairs, pupils should try to develop their own code by choosing to shift the letters by a different amount either positively or negatively. After developing their code, they should write a message, tear off the message slip and ask other pair of students to try to crack their code.	13 mins
Plenary	Slide 16 from 'cryptography.ppt'. Pupils should explain the following terms to their partner: Cryptography Decrypt Caesar cipher	5 mins
Extension	Use the internet and research other early methods of encrypting messages.	
Homework	Hand out a copy of 'homework1.doc' to each pupil	30 mins
Materials required	Hot cold starter.doc Cryptography.ppt Hieroglyph code.pdf* Hieroglyph decryption task.pdf* Caesar cipher task.doc Caesar cipher task answers.doc New cipher code task.doc Homework1.doc (reproduced with permission from Chris Coleman) Homework1 answers.doc (reproduced with permission from Chris Coleman) *non editable version provided as the hieroglyph font will revert to standard if it is not installed on your system	