

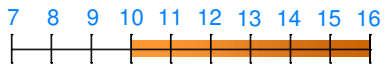
The Pig Pen Cipher

Investigation - Decoding and analysing information

Purpose

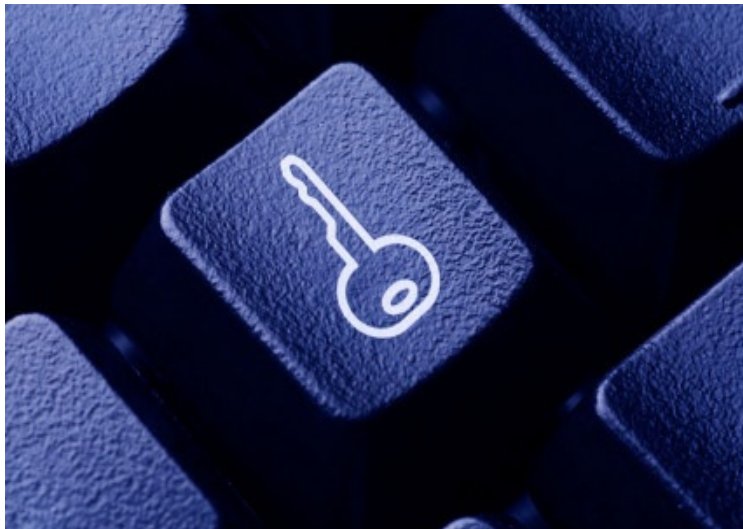
To introduce the concept of codes and encryption and their application.

Age range (years)



Subjects

Mathematics,
History, Citizenship,
Politics



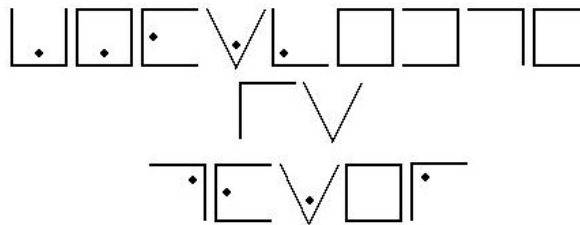
Background

Keeping information secret is crucial for spies. But codes are used in all walks of life - from banking to the exchange of e-mails

This activity introduces the process of coding using the example of the 'pig pen' cipher - a simple 'substitution cipher' where individual letters are substituted with symbols to create a coded message.

Steps

1. Draw the following:



2. Explain this is 'ciphertext' – an encoded message.

3. Give students the activity sheet (page two) and ask them to decode the message using the 'pig pen decoder'

The answer is 'Knowledge is Power' – a maxim attributed to the 'father' of the scientific method, Francis Bacon.

4. Ask students to encrypt their own messages, following the instructions on the activity sheet.

Discussion

- Can you invent your own coding system?
- Who might use codes? What might they be hiding?

Extensions

For older students:

- Find out why a Caesar Cipher is called the name it is.
- Many historians argue the Second World War was cut short by a famous code breaking effort. What code was broken and how?

Information on cracking the Enigma can be found at:

www.bletchleypark.org.uk

The Pig Pen Cipher – Activity Sheet

1. Using the pigpen decoder below decode the following message:



Write the decoded message here: _____

Do you know who said this?

2. Code the following messages in pig pen and write the ciphertext in the boxes provided:

- “Meet me at the station”

- “We are being watched”

3. Think of your own message. Using another piece of paper encode your message and pass it to a classmate to decode. Ask them to do the same for you.

The Pig Pen Decoder

A	B	C
D	E	F
G	H	I

J	K	L
M	N	O
P	Q	R

	S	
T		U
	V	

	W	
X		Z
	Y	

Why is it called the ‘pig pen’ cipher?

Rumour has it the cipher is so named because many of the shapes in the ciphertext look like ‘pig pens’ with lines representing the sides of the pen and dots representing pigs.

