Cracking Codes

If you find a piece of information that is difficult to understand, it might be written in a code. As a secret agent it is important to be able to decipher or 'crack' a code as well as to invent your own. In this activity you will have the opportunity to 'crack' some codes as well as design your own.

You have
A resource sheet with some coded messages for you to crack and a solution sheet in case you get stuck! Pens and paper as required.

Activity
Coded messages can be sent in a variety of ways using letters, numbers or pictures. In 'Lemony Snicket's Series of Unfortunate Events' it is the misspelling of certain words in a letter that leads the children to the hiding place of their Aunt.

On the resource sheet are five secret messages, see how many you can solve. You could time yourself to see how long it takes. Next, in pairs, make up your own coded language. You can use letters, numbers, pictures or a mixture of all three! Here are some useful points to remember:

- Try to keep the code simple but not obvious Single letters or groups of letters can have meaning The most devious codes will not look suspicious
- As you develop your code making skills, you can become more adventurous. For example, a series of numbers could be page numbers of a certain book and to crack the code you would have to put the first letter of each page together.
- When you have devised the ultimate code, have a code cracking competition where all the trainee agents have a go at solving each other's codes.

!KCUL DOOG

Useful Questions

- What strategies do you use when trying to crack a code? (This is a very useful question as it encourages the children to identify their thinking skills used)
- Does everyone approach the problem in the same way?
- Why might it be useful to send information in coded form?
- How many different types of code can you think of?
- Braille is a form of code. Who uses Braille and where do we feel it in everyday life? (Traffic crossings, medicine bottles etc.)
- If aliens landed on Earth, how do you think we should begin trying to communicate with them?
• When people pay for goods over the Internet, the computer sends their payment details in a code (a small padlock icon appears). Can you find out how this is possible?

Research Opportunities
• Some crosswords are coded, these are called ‘cryptic’. At first sight the clues seem to make no sense, but if you compare the crossword clues with the answers you can see a pattern. Study the ‘cryptic’ crosswords in a daily newspaper for a few days, then try to devise your own for your class to try to solve.
• Animals do not use the spoken word to communicate, how many different ways of animal communication can you discover? Which animals need to communicate and why? Which animal community do you think has the most advanced form of communication? What environmental factors do you think influence the way different animals communicate?
• Leonardo Da Vinci used mirror writing as a code to stop other people reading his notes. Try this yourself, if you manage to do it fluently it will look like a different language. Why does writing in a mirror look so different?

Useful Websites
This site introduces one of the most important code machines of World War
http://www.codesandciphers.org.uk/enigma/index.htm

You can see Leonardo's notebook here:
http://www.bl.uk/collections/treasures/davinci.html

Find out about animal communication here:
http://www.bbc.co.uk/nature/programmes/tv/talking/
Code Sheet

Code 1

Nvvg nv fmwvi gsv yirwty zg mllm.

Code 2

25,9,18,13,20       26,13       12,9,26,13,20,22       25,26,20
26,13,23           26,13       6,14,25,9,22,12,12,26

Code 3

Sgd vzhsdq hr z rox, sdkk ghl mnsghmf!

Code 4

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Code Solutions

Code 1
Meet me under the bridge at noon.
(Reverse the alphabet)

Code 2
Bring an orange bag and an umbrella.
(Number the alphabet then reverse it)

Code 3
The waiter is a spy, tell him nothing!
(Move each letter on one so a=b, b=c etc.)

Code 4
Leave now and tell no one.
(Each number is a letter l=a etc. but you only change the numbers with a £ sign, the $ signs are there just to confuse!!)