**Code breaking as easy as 1, 2, 3**

Think of the letters as numbers from 0 to 25 with A being 0, B being 1, C being 2 etc. Then encoding, shifting the alphabet forward three places, is the same as adding three to your starting number:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **Q** | **R** | **S** | **T** | **U** | **V** | **W** | **X** | **Y** | **Z** |
| **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** |

 **For example, encoding the letter 'A' is 0+3=3, which is a 'D'.
Coding 'I' is: 8+3=11, which is 'L'.
However, you do have to be careful when you get to the end of the alphabet, because there is no letter number 26, so you have to go back to number 0. In maths we call this 'MOD 26', instead of writing 26, we go back to 0.
Have a go at coding your name by adding 3 to every letter. Then have a go at coding your name by shifting the alphabet forward by more places by adding greater numbers e.g. adding 5, then adding 10. Then have a go at decoding. If your letters are numbers and encoding is addition, then decoding is subtraction, so if you've coded a message by adding 5, you will have to decode the message by subtracting 5.**

**Try coding the poem below using the plus 3 method:**

**Remember me when I am gone away,**

**Gone far away into the silent land;**

**When you can no more hold me by the hand,**

**Nor I half turn to go yet turning stay.**

**Remember me when no more day by day**

**You tell me of our future that you plann'd:**

**Only remember me; you understand**

**It will be late to counsel then or pray.**

**Yet if you should forget me for a while**

**And afterwards remember, do not grieve:**

**For if the darkness and corruption leave**

**A vestige of the thoughts that once I had,**

**Better by far you should forget and smile**

**Than that you should remember and be sad.**

**Code breaking activities**

1. Write your own limerick:

**Limerick**There was an Old Man with a beard,
Who said, 'It is just as I feared!
Two Owls and a Hen,
Four Larks and a Wren,
Have all built their nests in my beard!'

Limericks are poems that are 5 lines long and use the following rhyming pattern:

Lines 1,2 & 5 rhyme

Lines 3 & 4 rhyme

1. Once you have written your limerick – either use the code above or devise your own numerical coding system.

**Writing more complex poems**

**Next you could try writing more complex poems:**

You could use these line starters to help you (see the example):

**I am from…**

**You are the…**

**If I could…**

**Tomorrow could be…**

**Tell me why…**

Again, once you have written your poem, develop a system to code it.

Give your class mates your coded poems with the code breaker and let them crack the code.