ACTIVITY TWO: CODES

Learning objectives:
To be able to use simple formulae
(Year 6 – Algebra)

Prior learning:
Students will need to have had experience of simple formulae previously and be confident using addition and subtraction as inverses.

Introduction:
Discuss: what is a code? Why were codes important during the war?

MAIN TASKS:
1. Introduce simple substitution cipher and give the students the opportunity to write their name in code.

A	B	C	D	E	F	G	H	I	J
1	2	3	4	5	6	7	8	9	10
K	L	M	N	O	P	Q	R	S	T
11	12	13	14	15	16	17	18	19	20
U	V	W	X	Y	Z				
21	22	23	24	25	26				

2. Ask - is this a good code? Draw out of your discussion that this code will be very easy to crack.

3. Introduce formula for new code: coded letter = n + 2 (eg: A = 3 because 1 +2 is 3, B = 4 because 2 + 2 is 4…) students practise using this new code.

4. Ask - what will be the formula to decode a message? (coded letter = n – 2)

5. Students write their own coded messages to each other and decode them.

Ideas for differentiation
Lower attainers: only use simple substitution cipher (coded letter = n)

Higher attainers: invent their own two-step algebraic codes, eg: coded letter = 2n – 3. What will be the formula to decode the letter?

Review
Discuss different coding systems that were used during the First World War such as this grid code system:
[Code](#)