Create Your Own Codes!

In this activity you have had a go at breaking some simple codes to get an advantage over an opponent. If you would like to have a go at creating your own codes, why not try these:

Book Code

Get two books that are the same, one for you and one for the person you want to send a message to. Find the words that you want to put into your message. For example, if you want to put the word 'code' into your message, and this word is on page 212 of the book, write down 212. Then, work out which line the word is in, and write this down, so if the word 'code' is on line 7, you get 212-7. Then add the number of the word in that line. So if 'code' is the 4th word in the line, the code becomes 212-7-4. Do this for all the words of your message, and only someone with the exact book you used will be able to read it!

Caesar Cipher

This is a bit like the letters code you had to break in this activity, only the letters of the alphabet are shifted 3 places backwards, so A becomes X, B becomes Y, C becomes Z, and D becomes A and so on.

Letter in code	X	Y	Z	A	B	C	D	E	F	G	H	I	J
Really means	A	B	C	D	E	F	G	H	I	J	K	L	M
Letter in code	K	L	M	N	O	P	Q	R	S	T	U	V	W
Really means	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Try creating your own codes and test them out with your friends!

If you would like to have a go at breaking some more codes, you can go to the CIA website at https://www.cia.gov/kids-page/games/break-the-code/index.html, and see if you can beat the CIA!

Codebreakers!

Codes have been used to send secret messages for centuries, very often to direct armies and navies in wartime. During World War Two, the Germans used a code machine called Enigma that created codes that were so difficult to break that German submarines were able to sink British and American ships before they could be stopped. The British and Americans worked hard to break the Enigma Code, and it was only when one Enigma machine was captured that the British and Americans could find out exactly where the German Submarines were going to be.

Since World War Two, very sophisticated codes have been used to pass secret messages around the world. Organisations such as MI5, the FBI, and the CIA spend millions of dollars on developing new codes and breaking the world's most difficult codes. The technology that has been developed as a result has been used in computer technology, and the QR Codes that you can use if you have a smart phone have been created as a result.

In this activity, you will play a game of Battleships with a difference! You have the chance to break an enemy code and get an advantage in the game, but remember, the enemy will be trying to do the same thing!

The Rules:

Work out a code that you will use to conceal the locations of your ships. Decide where you wish to place your ships and given the encoded locations to your opponent. Then, try to break the enemy code as you take it in turns to take shots at each other. The first team to break the opposition's code will have an advantage in the game. You can have three ships, each one taking up three squares on the grid. Ships must be placed vertically or horizontally, and cannot overlap.

Breaking the Enemy Code!

You can use this page to try to break the code being used by your opponent.

The real locations of your opponent's ships should include a letter and a number, so first you should see if the encoded locations have either a letter and a number or two numbers, or two letters. Depending on this, you can begin to guess at which code might have been used.

Once you have worked out which codes might have been used, you can test these out by taking a couple of shots. If they hit, then you may have found the right code. You can work out the rest of the locations, and continue to take your shots. Use the space here to try to work this out.

Once you have worked out the enemy code, write the locations of the ships in this grid.

	Square 1	Square 2	Square 3
Ship 1			
Ship 2			
Ship 3			

Sink the Enemy Ships!

Use Grid A to place your ships and record the enemy shots. Use Grid B to record your shots against the enemy, and mark hits and misses. Remember, if you have successfully broken the enemy code, you will have an advantage in the battle!

Grid A:
Place your ships and mark the enemy shots

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							

Grid B:
Locate and destroy the enemy ships!

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							