

# Can you work out the three puzzles to get the three numbers?

## Padlock Challenge 1





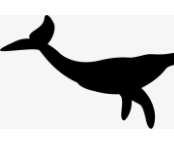
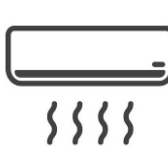




**1** You need to use the right code to work out the letters in the boxes to help you get your first padlock number

Input	Code 1	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
	Code 2	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	Code 3	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L
	Code 4	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F
Output		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

In	F	I	Q	Z	F	K	R	A	G	D	Y	U	Z	G	E	Q	U	S	T	F	Q	Q	Z
Out																							

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**2** Can you match the engineered item (6-0) to the animal (1-5) that inspired it? Once you've worked it out you need to put the right numbers into the boxes and do the sums to work out the second padlock number.

1 Bat	2 Mosquito	3 Kingfisher	4 Termite	5 Whale
				
				
6 Air Conditioning	7 Surfboard Fin	8 Radar	9 Bullet Train	0 Needles

1	+	<input type="text"/>	=	<input type="text"/>
2	+	<input type="text"/>	=	<input type="text"/>
3	+	<input type="text"/>	=	<input type="text"/>
4	+	<input type="text"/>	=	<input type="text"/>
5	+	<input type="text"/>	=	<input type="text"/>

Add together

Add digits together

**3** Use the description to work out the substance. Once you know that you need to find the chemical symbol for it and then the atomic number to help do the sums at the end. This will get you your third padlock number.

1. A yellow precious metal	Chemical Symbol	Atomic Number(s)	Add atomic numbers
2. The metal in our blood			
3. Goes great over fish and chips			
4. Drink two litres of this every day			
	Add all the numbers together		<input type="text"/> <input type="text"/> <input type="text"/>
	Add the individual digits together		<input type="text"/>

*There's something a bit different about this chemical symbol and atomic number – you might need to do multiplication!*