

# Computing Transition Challenge

A key skill in Computing is Code Breaking. Computers use encryption to keep your information secure.

# An early cipher was used by Julius Caesar

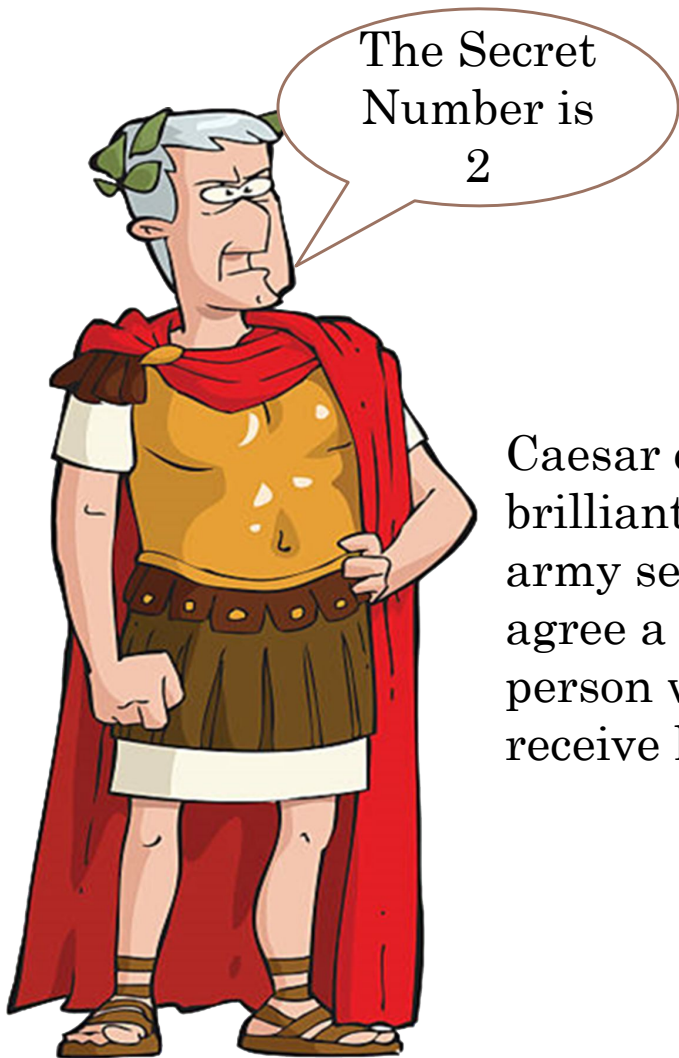


Caesar was a famous Roman general at a time when there were no telephones, computers, televisions, or radios. If you wanted to send a message to someone then it had to be written out and taken to them.

This meant that Caesar had a problem. If someone captured his messenger, they could take the message and read it to find out what information he was sending.



Now!  
Urgent!



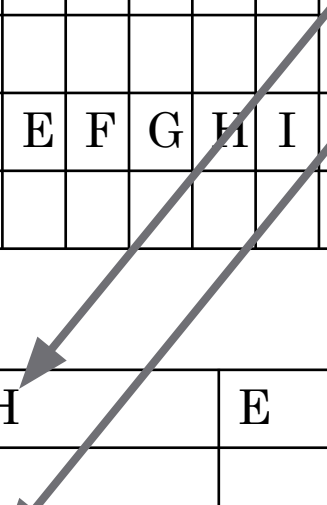
Caesar came up with a brilliant plan. Before the army set off, he would agree a number with the person who was going to receive his message.



He then got two copies of the alphabet on separate strips of paper.

He would then move the letters across by the agreed number. This is called shifting.

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



H	E	L	L	O
J	G	N	N	Q

The word hello now reads as JGNNQ

Once the new letters are copied in the message looks unreadable unless you know the secret number (or key)

This process is called encryption



Caesar's Challenge 1, use the key below to complete tasks A, B, and C

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



A) Encrypt the word School	S	C	H	O	O	L

B) Decrypt DCPCPC	D	C	P	C	P	C

C) Decrypt USWKFU	U	S	W	K	F	U

# But what if you don't know the number of places?

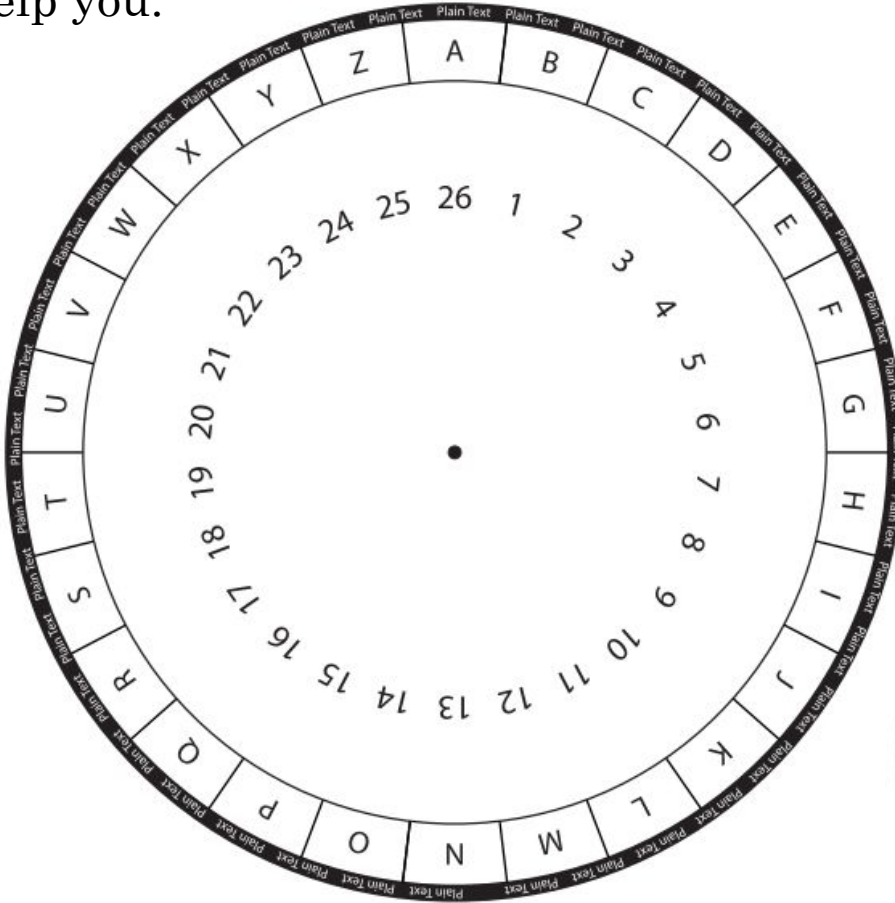
- Here are some pointers:
  - In Caesar's Cipher all the letters are moved across using the same number of places. Once you find out that number you've cracked it.
  - Messages often begin with common words or phrases like Good Morning, or Welcome, or Hello.
  - When you work out one word you can substitute the letters in the rest of the message.
  - It sometimes helps to spot repeated words or phrases.
  - If you know who and where the message came from then you can try to figure out parts of words.





Caesar's Challenge 3, Now create your own secret message. You can use the wheel and/or the strips provided below to help you.

## Caesar Cipher Wheel



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

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

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

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

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