The two most important methods used to code a message are the transposition and the replacing methods. In the first method the letters of the original message remain intact and the order in which they appear is what changes. But in the replacing method the letters are replaced by numbers, letters or signs, while keeping the original order of the letters. This method is also known as codification. Both methods can be used in the same coding system, one or several times, in order to make it more difficult to decipher them.

In this unit we are going to see an example of the Caesar replacing method.

In this coding method every letter of the text to be codified is replaced by another letter that is a certain number of spaces further along in the alphabet. The key of this method is the number of positions.

Let's see an example:

Let's suppose that the key is 18 and the message to be coded is:

NEXT MONDAY THERE IS A MATH EXAM

We represent in a table the new alphabet moved by 18 positions:

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
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

We replace every letter with its correspondent in the new alphabet. Our message will be as follows:

NEXT MONDAY THERE IS A MATH EXAM

FWPL EGFVSQ LZWJW AK S ESLZ WPSE

Therefore the receptor will receive the following message:

FWPLEGFVSQLZWJWAKSESLZWPSE

To decipher a message codified by Caesar's method we have to make the inverse process, reducing positions to the letters with the known key.

Let's see an example:

We have received the following message codified by Caesar's method with key 10:

DROCEXCRSXOCDYNKI

First we represent our alphabet reducing 10 positions to every letter:

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
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

Now, we decode the message

D	R	O	C	E	X	C	R	S	X	O	C	D	Y	N	K	I
T	H	E	S	U	N	S	H	I	N	E	S	T	O	D	A	Y

Therefore the codified message is: The sun shines today.