

CAESAR CIPHER

ENCRYPTION AND DECRYPTION

A **Caesar Cipher** is named after Julius Caesar, who used it to send secret messages to his generals. It is a **substitution cipher**, meaning that the same letters are substituted for each other.

To **encrypt** a message in the Caesar Cipher:

Set your **encryption wheel** (the smaller wheel) so that your **shift** (the number of places to move your letters) lines up with the letter A. Use a paper clip to hold it in place. Then go around the **decryption wheel** (the bigger wheel) and substitute the letter on the encryption wheel for the original letter.

Example: You have set your cipher wheel for $A \rightarrow D$ (a shift of 3) as your encryption. To write the word **HELLO** you would look at H on the bigger wheel and see it lines up with K on the smaller wheel. Then you would look at E and see it lines up with H. When you are done, you would have **KHOOR** as your encrypted text.

To **decrypt** a message in the Caesar Cipher:

If you have not been given the **shift** (the number of places your letters will be shifted) for the cipher, you will need to figure it out. We've given you some hints for how to do this, but if you are sending a message to a fellow agent, you will want to let them know your shift in advance.

Set your **decryption wheel** (the bigger wheel) so that the letter A lines up with your **shift**. Use a paper clip to hold it in place. Then go around the **encryption wheel** (the smaller wheel) and substitute the letter on the decryption wheel for the letter in your message.

Example: You have a shift of 3, so you set your cipher wheel with the number 3 (letter D) on the small wheel lined up with the letter A. If your encrypted text is **JRRGEBH** then you would find your letters on the smaller wheel and read the larger wheel to decrypt the message **GOODBYE**.

COMMUNIQUE

HINTS FOR SOLVING AND SOLUTIONS

Some Hints for Decrypting the Communiqué from B.O.R.E.D.

This document contains a lot of little words. Specifically: It contains the one-letter word “n”. There are only two one-letter words in the English language (and this is in English, we promise). That should narrow your choices down quite a bit.

Try translating some of the two-letter words using the two possibilities for n and see what you get.

This rule applies to all encrypted messages: translate the little words first. You can find a **frequency table** online of most-common two-letter words (there are a few), and **the** and **and** are the most common three-letter words.

Remember, in a Caesar Cipher you just need to find one letter pair and all the rest will follow.

If you are **ABSOLUTELY STUCK**...

The text of the communiqué from B.O.R.E.D. is below. Remember, solving puzzles should be FUN so if you aren't having fun PLEASE let us know!

Agents—

We have a lot of work to do on the new project.

Our next TOP SECRET meeting will be in Paris, France.

We will meet at the pyramids of the Louvre.

Don't be late.