

Your challenge is
to decode the
following message:

XJIBMVOPGVODJIN!
TJP EPNO NJGQZY
BMVIYZ KMVDMDZ
KPWGDX
GDWMVMT'N
ADMNO XJYZ
XMVXFZM
XCVGGZIBZ!

**SEND YOUR
SOLUTION TO
KDEWAAL@GPPL.CA
TO BE ENTERED
INTO OUR PRIZE
DRAW**

**DEADLINE:
NOVEMBER 1ST**

WHAT IS CRYPTOGRAPHY?

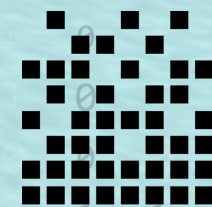
Modern cryptography combines computer science, math, electrical engineering, and other systems to encode information. However, cryptography began with people needing to write down secrets in the analog world.

Through cryptography, someone can convert the actual message (called 'plaintext') into something nonsensical (called 'ciphertext'). Once the code is cracked, you can also transform that ciphertext back into plaintext.

CODE CRACKER CHALLENGE

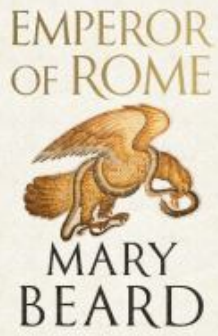


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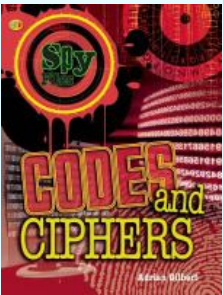
BIOGRAPHY

Emperor of Rome
by Mary Beard

**NON-FICTION
ADULT**

937.06 BEA

This critically-acclaimed biography is also a clue on how to decode the secret message.



CRYPTOGRAPHY

Codes and Ciphers by Adrian Gilbert

**NON-FICTION
JUVENILE**

J 652.8 GIL

If you want to learn more about cryptography, this book might be one place to start.

Imagine you are a general in the Roman Republic approximately 2000 years ago. You have secrets you need to convey, but you can't let them fall into enemy hands. How do you encode your message?

According to Roman historian Suetonius, Julius Caesar devised a cipher whereby all the letters in the alphabet were transposed. That is, 'A' became 'D', 'B' became 'E', and so on. This is known as a Caesar cipher.

When trying to solve a Caesar cipher, there are only 25 possible solutions, so it can be solved by brute force alone. All you need to crack the code is a single letter, because the order of the alphabet does not change. If you know that 'J' always becomes 'E', you can also infer that 'V' always becomes 'Q', because of the number letters being transposed.

Of the 25 possible solutions, only 1 will actually make sense. Consider the 3-letter word in the encoded message. What transposition would transform 'TJP' into a recognizable word?

Get cracking!

HINT #3

A substitution cipher functions by substituting the letters of a message with different letters. In a *simple* substitution cipher, each letter is substituted by another letter.

For example, in a simple substitution cipher the letter 'E' might be substituted for 'J' every time 'J' would occur. Therefore, if you solve one word, you will also have bits and pieces of other words.

Substitution ciphers can often be solved with the help of probability. What letters show up the most in the English language? What combinations do you expect to see?

If an encoded message includes spaces or punctuation marks, you might be able to make educated guesses based on the shapes that persist in the ciphertext version.

Common 3-letter words or apostrophes might give you the foothold you need to crack the code.

HINT #2

HINT #1