

Cryptography



Cryptography is derived from the Greek word 'kryptos' which means hidden or secret



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Cryptography is thought to date back to the Egyptians and their use of hieroglyphics.



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Hieroglyphics were complex pictograms.

At the time, the meaning of the hieroglyphics were known by only a few.



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What does this hieroglyphic message say?



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You can only understand this message if you have the code or the key to 'unlock' or decipher it.



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Now you have the 'key', see if you can decipher the message.



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Julius Caesar developed the first modern cipher. It is known as the 'Caesar cipher'

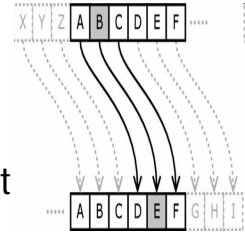


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Each character in the message is replaced by the character three positions ahead of it in the alphabet



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A → D
 B → E
 G → ?
 Z → ?

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

Caesar Cipher

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

Decode the following message:
 FURVV WKH ULYHU WRQLHKW

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

The message said:
 CROSS THE RIVER TONIGHT

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Why might Julius Caesar encrypt his messages?

Think of two disadvantages of using the Caesar Cypher

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Why might Julius Caesar encrypt messages his messages?

- So that he could safely send messages to his troops.

Even if the messenger was caught, his enemies wouldn't understand the message

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Think of two disadvantages of using the Caesar Cypher

-The person receiving the message would have to understand how to decrypt it

- Caesar ciphers are easy to break

-It doesn't allow for numbers or symbols

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Plenary

Explain the following terms to your partner:

- Cryptography
- Decrypt
- Caesar Cypher

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