Encryption (non-PKE) Asynchronous Assignment

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Learning Targets:

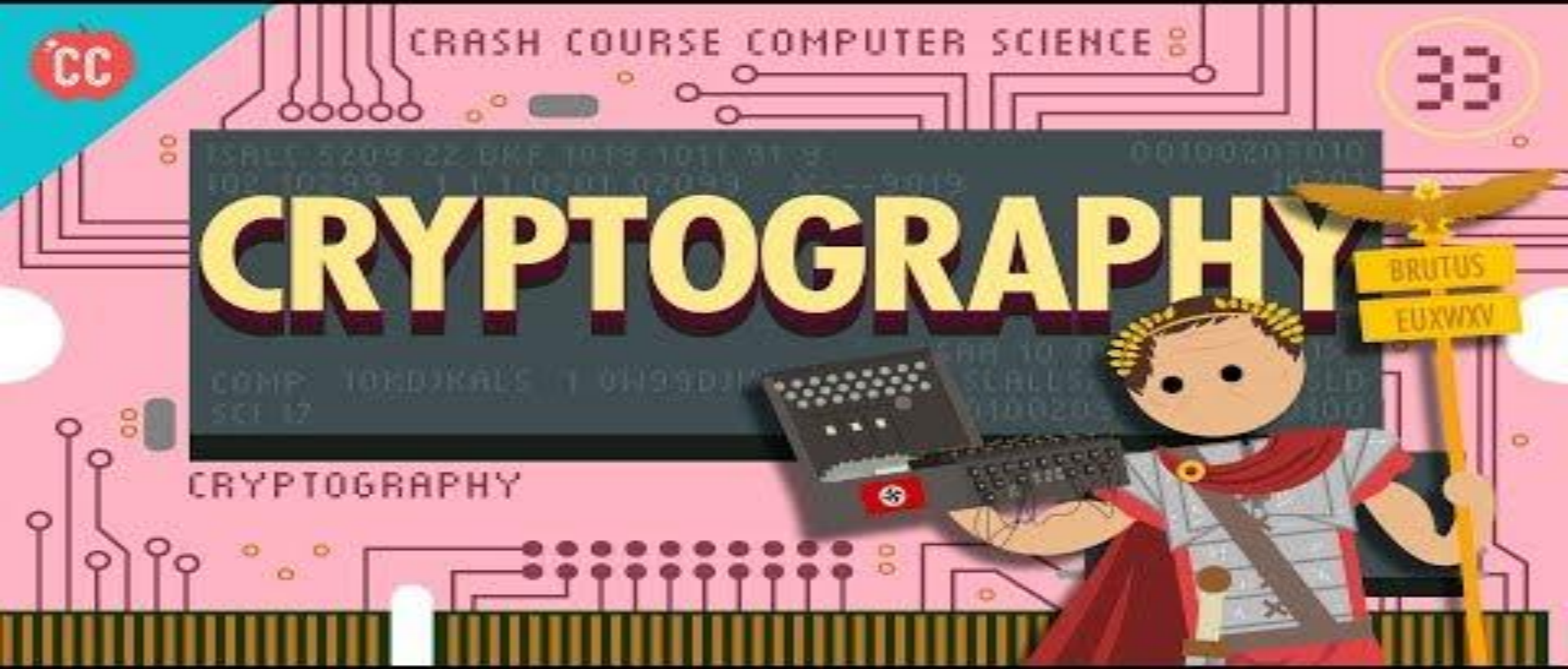
Today you will….

1. Learn what encryption/decryption is
2. Learn several types of encryption methods
3. Decode encrypted messages

Success Criteria:

Successfully decode the encrypted messages

Please watch the following videos introducing Cryptography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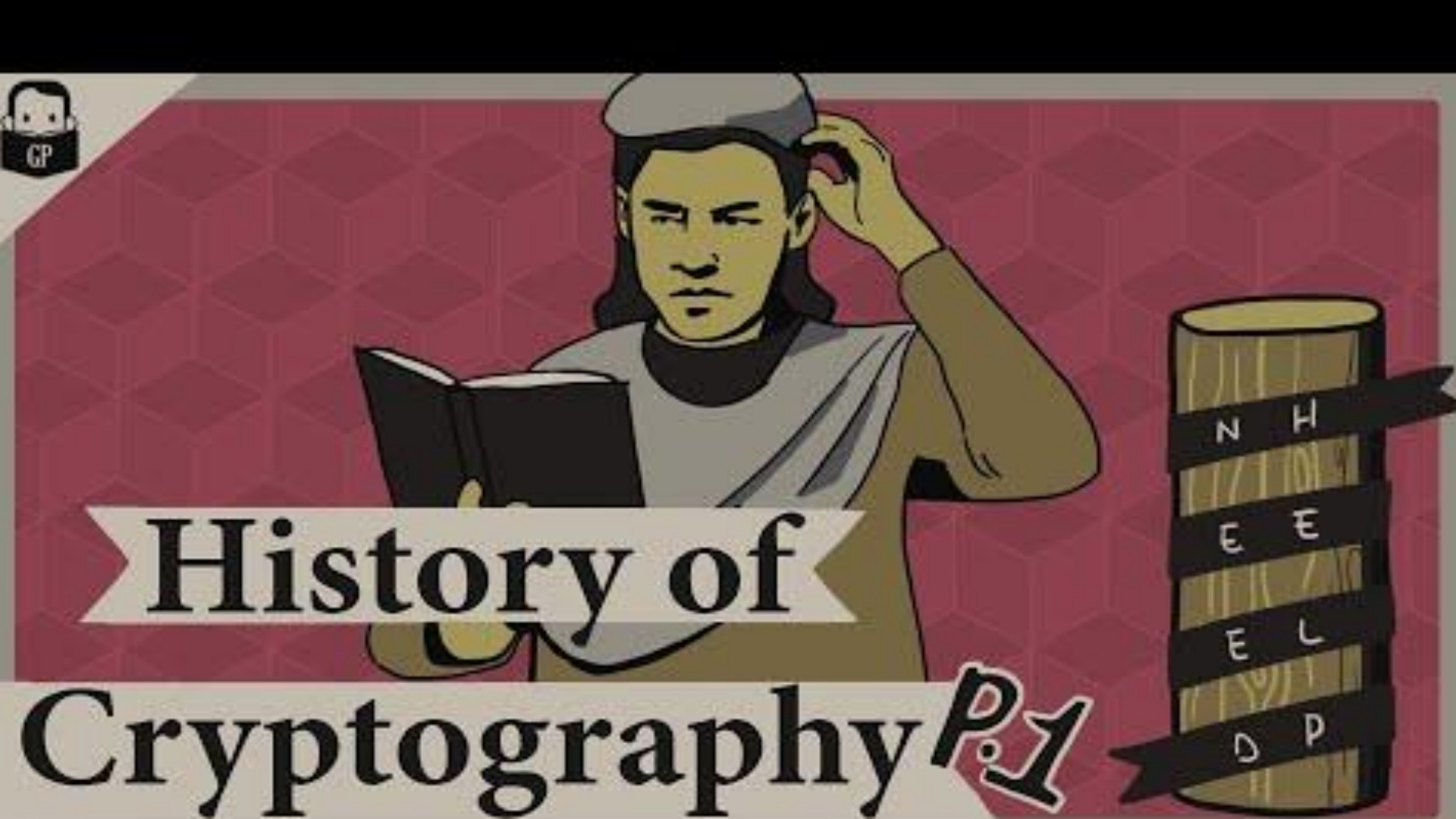

GP
History of
Cryptography
P.1
N H
E E
E L
D P

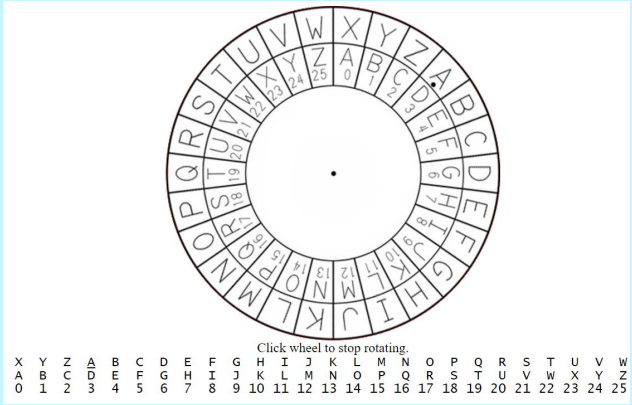
Now you will be given an assortment of messages encrypted with various types of ciphers. Your job is to decrypt each message based on the cipher and the key. Good luck!

Substitution Ciphers: Caesar Cipher

You receive the following message:

FRQJUDWXODWLRQV BRX FUDFNHG WKH FRGH

The letters are not what they seem to be. To decode this message you have to move backwards 3. Decipher the encrypted message using a cipher wheel and a shift.



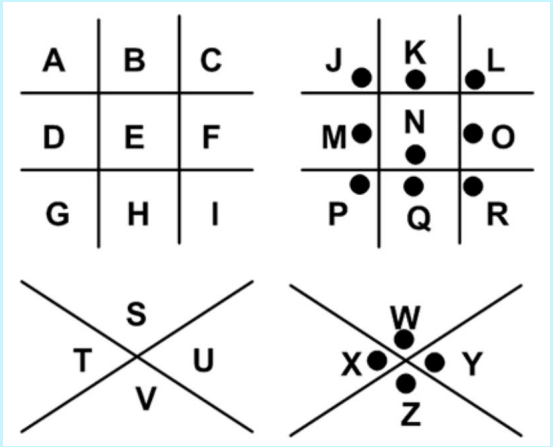
Resources and Videos:

- Virtual Cipher Wheel
- The Caesar Cipher - Khan Academy
- Crack the Code! Make a Caesar Cipher - Scientific American
- Cipher Wheel Printout
- More Caesar Cipher Practice

Substitution Ciphers: Pig Pen Cipher

Using the Encryption Key, decipher the following encrypted message.

Encryption Key:



Further Reading:

Pigpen Cipher Reading

Phone Keypad Cipher

Decipher the following encrypted message.

222 666 6 7 88 8 33 777

7777 222 444 33 66 222 33

777 666 222 55 7777

[Phone Keypad Encryption Key]

Permutation Cipher

Decipher the following encrypted message.

L	L	A	Y	R
O	F	E	L	P
M	I	S	O	O
T	Y	A	W	S
I	S	I	H	T

Encryption Clue: Look real close and you will find, to decode this message start with the end in mind.

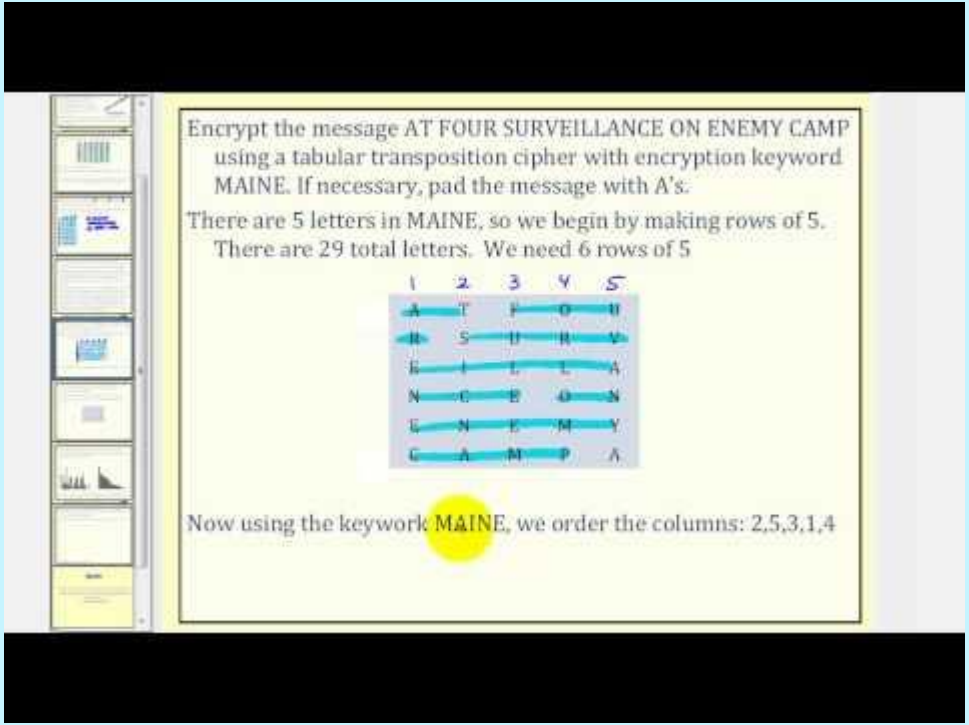
Further Reading:

Permutation Cipher - Crypto Corner

Transposition Cipher

Here is a fun cipher that requires logic AND a physical object!

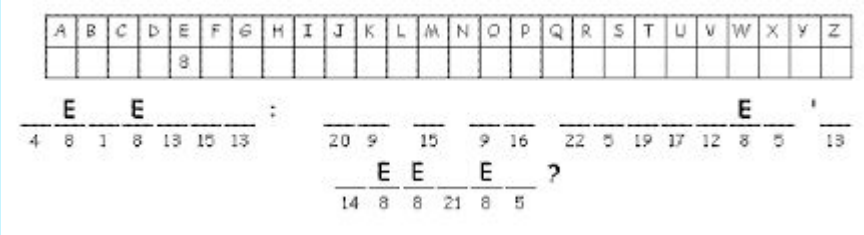
Watch from 0:00 to 4:30



Monoalphabetic Substitution Cipher (Cryptograms)

Want to try and challenging puzzle? Try this cryptogram!

Hint: Start with the short words and consider the letter frequency.



More Ciphers…

There are so many more ciphers used throughout history to encode confidential information. Read more about them here!

Answer Key

Caesar Cipher: congratulations you cracked the code

Pigpen Cipher: hello world

Phone Keypad Cipher: computer science rocks

Permutation Cipher: this is way too simple for yall