

# Ames Public Library @HOME Activities

## Cryptography

Codes and ciphers have been used since ancient times. Cryptography is the use of codes and ciphers to keep information safe. One of the oldest encrypted message is from Mesopotamia dating to 1500 BCE. It's a secret recipe for pottery glaze. To learn more see a related video on the Library's YouTube Channel at <http://bit.ly/APLvideos>.

### Books and Media:

Title	Author / Performer	Call Number
<i>Create Your Own Secret Language: Invent Codes, Ciphers, Hidden Messages, and More</i>	Peterson, David	J 652 PET
<i>Can You Crack the Code?: A Fascinating History of Ciphers and Cryptography</i>	Schwartz, Ella	J 652 SCH
<i>Mysterious Messages: A History of Codes and Ciphers</i>	Blackwood, Gary L.	J 652.8 BLA
<i>Top Secret: A Handbook of Codes, Ciphers, and Secret Writing</i>	Janeczko, Paul B.	J 652.8 JAN
<i>Secret Codes</i>	O'Brien, Eileen	J 652.8 OBR
<i>Great World War II Projects</i>	Bell-Rehwoldt, Sheri	J 940.53 BEL
<i>Who Broke the Wartime Codes?</i>	Barber, Nicola	J 940.54 BAR
<i>Chester Nez and the Unbreakable Code: A Navajo Code Talker's Story</i>	Bruchac, Joseph	J 940.54 BRU
<i>Navajo Code Talkers</i>	Kallen, Stuart	J 940.54 KAL
<i>Unsung Heroes of World War II: The Story of the Navajo Code Talkers</i>	Durrett, Deanne	J 940.5486 DUR

### Websites:

URL	Notes
<a href="https://morsecode.world/international/translator.html">https://morsecode.world/international/translator.html</a>	Morse code translator that you can use to send secret messages of your own.

## Take Away Kit: Crack this code!

### Bag Contents:

- 1 Postcard with stamp
- 1 Pencil
- 3 messages in code

To learn how use to decipher code watch the @Home Activity video on the library's YouTube Channel at <http://bit.ly/APLvideos>.

- Your 3 messages are written in code. The key to decipher them is below.
- This type of code is called a monoalphabetic cipher. Ours is created by taking the alphabet and mapping it to its reverse. So here the first alphabet "A" becomes the last one "Z", and "B" becomes "Y" and so on. So **C A T** will be **X Z G** in code.

### Your mission is:

- Decipher one or all of the messages below.
- Write the message on the postcard provided.
- Mail it or bring it back to the Library. **The postcards have the required postage on them, so you do not need to add any stamps.** If you want to bring it in to the Library there will be a special mailbox in the youth department that you can put your postcard into, or you can bring it to the youth desk.

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

Easy – R OLEV GL IVZW.

Medium – IVZWRMT RNKILEVH BLFI NRMW.

Hard – DSVM RM WLFYG ZODZBH TL GL GSV  
ORYIZIB.

## Vocabulary

Acronym – A word made from the first or first few letters of the words in a phrase.

Anagram – A secret message made by rearranging the letters in the original message.

Cipher – A secret way of writing that changes the messages into secret codes.

Code talkers – Navajo men who used their native Navajo language to send and receive encrypted messages during World War II for the US army.

Cryptography – The study of writing of secrets, especially codes.

Cryptologist – A person who studies the science of making and breaking codes.

Decode – To turn something that is written in code into ordinary language.

Decryption – The process of turning encrypted text into its original text. Decryption turns cipher text back to plain text.

Emoticon – A group of letters or punctuation symbols that represent an emotion.

Encode – To turn something that is written in ordinary language into coded text.

Encryption – The process of taking plain text, like a text message or email, and turning it into an unreadable format called “cipher text.” This helps protect information.

Key – The process or answers that a message is coded and decoded.

Morse code – A communication system that represents the alphabet and numbers with a series of dots, dashes, or a combination of both.

Substitution – Using a letter, number, or symbol to represent something other than its original meaning.

Transposition – Rearranging the order of items in something.

Source: Making secret codes by Jillian Gregory **J 652.8 GRE**

Speaking secret codes by Sheri Bell-Rehwoldt **J 652.8 BEL**

Breaking secret codes by Jillian Gregory **J 652.8 GRE**

