

BOOMbox at Home

Decoding Challenge



During World War I and World War II, Native Americans played a special role in the Allied Forces. Native American soldiers, known as code talker, developed a code for transmitting messages based on their languages. The most famous of these codes is the one created by the Navajo (or Diné). A dictionary based on the code was declassified in 1968. Using [that code dictionary](#), try to decode these messages! We'll also share more about code talkers in a [BOOMbox at Home blog post](#).

Encoded

- CHA-GEE BIH-TSE-DIH AL-NESHODI NE-TEH UT-ZAH-HA-DEZ-BIN
- BESH-LEGAI-NAH-KIH GLOE-IH-DOT-SAHI KHAC-DA BIH-NA-HAS-DZOH MA-E A-KHA NO-DA-IH GAH BILH TOH-DINEH-IH.
- YEEL-STOD CHAY-DA-GAHI BILH-BIGIH CHAH-HO-OH-LHAN-IH
- JI-DIN-NES-CHANH GLOE-EH-NA-AH-WO-HAI NAY-ES-TEE YO-AH-HOL-ZHOD.
- A-CHI DIBEH-YAZZIE A-KHA A-KEH-DI-GLINI AH-NAH KLESH BA-AH-NE-DI-TININ TLO-CHIN KLIZZIE-YAZZIE TKIN DZEH BI-SO-DIH NO-DA-IH SHUSH AH-JAD YEH-HES MOASI NASH-DOIE-TSO A-CHI TOISH-JEH DAH-NES-TSA BE-LA-SANA AH-LOSZ TSAH-AS-ZIH
- BE AH-NAH BA-GOSHI A-KHA LHA-CHA-EH TKIN A-CHIN KLIZZIE YEH-HES KLESH MA-E NO-DA-IH TSAH
- TA-BAS-DSISSI GLOE-IH-DOT-SAHI WHO-NEH GLOE-EH-NA-AH-WO-HAI NE-OL IL-DAY
- AH-NA-SOZI-YAZZIE BIH-TSEE-DIH NA-WOL-NE AL-TAH-JE-JAY BI-TSAN-DEHN BESH-BE-CHA-HE
- A-DO-NIL A-TKEL-EL-INI
- BE-TAS-TNI AH-JAH AH-NAH THAN-ZIE TSIN-TLITI DZEH TKIN A-CHIN A-WOH TSE-GAH AH-NAH CLA-GI-AIH WOL-LA-CHEE AH-LOSZ KLIZZIE-YAZZIE TSE-NILL D-AH TSA-E-DONIN-EE TKIN A-KEH-DI-GLINI DZEH
- NASH-DOIE-TSO AH-NAH THAN-ZIE KLESH JEHA NE-AHS-JAH D-AH A-KHA A-WOH LIN DZEH TOISH-JEH TLO-CHIN NE-AHS-JAH BE-TAS-TNI SHUSH A-KHA AL-NA-AS-DZOH GLOE-IH CHA DZEH TSAH YEH-HES A-WOH AH-LOSZ AH-JAH NE-AHS-JAH NE-ZHONI AH-NAH TSAH DIBEH
- TSA-E-DONIN-EE TSE-NILL NASH-DOIE-TSO DIBEH-YAZZIE TKIN DIBEH NA-AS-TSO-SI TSAH-AS-ZIH CHUO TSE-NILL A-KEH-DI-GLINI A-KHA DAH-NES-TSA A-CHI A-WOH AH-NAH DIBEH DZEH BE-LA-SANA KLESH NE-AHS-JAH TSAH

No peeking! The decoded messages are on the next page.

Decoded

- The previous mission was successful.
- Captain will ambush zone four with ships.
- Seize tank within village.
- Retreat when visibility (is) clear.
- I love Skokie Public Library.
- Decoding is fun.
- Coast Guard will report when storm arrive(s).
- Fortify base. Expect attack from Germany.
- Execute saboteur.
- Meet me in the park at five.
- Let's go to the BOOMbox tomorrow.
- Fall is my favorite season.

What will you learn today?

BOOMbox at Home

Scytale

Scytale is an ancient form of encoding messages, thought to be invented by the Romans. This simple, low-tech encryption technique still works today. Try it for yourself!



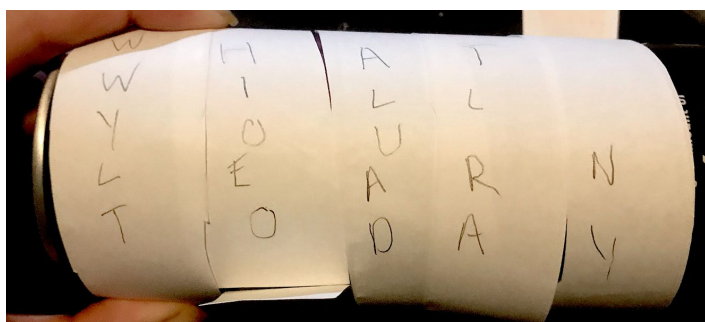
Supplies

- paper
- scissors
- tape
- pencil or pen
- a tube or cylinder (for example, paper towel or toilet paper roll, soup can, or soda can)

Instructions

- Create a long strip of paper by cutting a sheet of paper into strips and taping the strips together.
- Wrap the strip of paper around the cylinder. Clip or tape it in place.
- Write your message straight across, with one letter per loop. When you reach the end of the tube, start another row of text below the first.
- Remove the paper from the tube. You can no longer read the message!
- Pass the strip of paper on to your friend. When your friend wraps the paper around a cylinder of the same size, they'll be able to read your message.

Send a photo of your project to mycreation@skokielibrary.info and we may feature it on social media.



BOOMbox at Home

Cipher Resource Guide

Throughout history, many different types of ciphers have been used to encode secret messages. Here is an overview of some ciphers that you can try out for yourself.



Types of Ciphers

Book Cipher

In this cipher, the sender and receiver agree to use a specific book as a key. The sender finds each of the words in the message in the book and writes out the location (page, line, and word) of each word. The receiver can then use the book to look up the words and decode the message. It is essential that both the sender and receiver are using exactly the same edition of the book.

Cardan Grille Cipher

In this cipher, the sender writes out a longer piece of text containing all of the words in the message. Then, they create a template with cut outs corresponding to the locations of the words in the message. When the receiver puts the template over the text, they see the message, but when the template is removed, the text looks like normal, unrelated writing.

Number Coding

In this cipher, numbers are assigned to each letter of the alphabet. The sender spells out the message using the corresponding numbers.

Pigpen Cipher

In this cipher, symbols are assigned to each letter of the alphabet. The sender spells out the message using the corresponding symbols.

Scytale

In this cipher, the sender and the receiver each have cylinders that are the same size. The sender wraps a long strip of paper around the cylinder and writes the message on the wrapped paper. When unwrapped, the strip of paper appears to have a random jumble of letters, but when the receiver wraps the strip around their cylinder, they can read the message. Learn more about how to use this type of cipher in [[link activity sheet](#)].

Additional Resources

Want to learn more about ciphers and cryptography?

- Watch this video for a [simple overview of cryptography](#).
- Get [information about these and other simple ciphers](#).
- Check out [more of the math involved in cryptography](#).

What will you learn today?