

SECRET MESSAGE IN A BOTTLE

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Decoding secret messages is sure to be a hit with older children and tweens! First they create their secret codes, then write secret messages to each other. Have them put their secret messages into empty soda bottles for transport. Suggested runtime: 45–60 min.

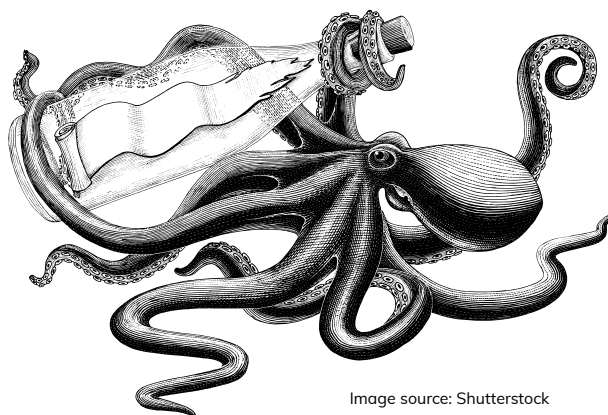


Image source: Shutterstock

MATERIALS AND PREPARATION

Materials: Paper; pens/pencils/markers; empty plastic water bottles; printable code references (see Resources); cardstock, split pins, and template (optional, for cipher wheel).

Instructions:

- Before the program, set up tables and chairs, and set out supplies.
- Once children have experimented with codes, they can either decode messages that you've put in bottles before the program, or trade their own codes with other children to decipher.
- They could also decorate the bottles.

Secret Code Ideas

Number Substitution

One number represents one letter. The simplest version is 1=A, 2=B, 3=C, and so forth.

Morse Code

Letters are represented by lines and dots. See Lighthouse STEAM Challenge on page 304 for a Morse code printable.

Book Cipher

This code requires that both the code writer and the person decoding it use the same edition of an agreed-upon book. It references entire words rather than letters. It works by providing numbers in sequences of threes—these numbers refer to the page number, line number, and word. You could use books in the library as references for this cipher!

Pigpen Code

This code uses shapes and dots to represent letters. (See Resources for a printable Pigpen code alphabet.)

Cipher Wheel

This code gives the children an opportunity to create their own cipher wheel.

- Print the cipher wheel template (see Resources) onto cardstock.
- Cut out the circles.
- Write the alphabet in the outer margin squares of each wheel.
- Use a split pin to secure the wheels together through the center, with the smaller wheel on top.

To use:

- Align the wheels so that the alphabet matches on both wheels.
- Choose two letters that both you and the recipient of the code will need to remember.
- Adjust the wheels so that these two letters line up.
- Now, you can use a simple letter substitution method to write your code!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

Secret codes from *Enchanted Little World*: <https://bit.ly/3c05AhP>

Secret codes from *Pickle Bums*: <https://bit.ly/3hTpiiZ>

Cipher wheel tutorial from *Savvy Homemade*: <https://bit.ly/3fnFuaq>

Printable pigpen cipher from *Pickle Bums*: <https://bit.ly/3umjuAZ>

Books

Non-fiction

Top Secret: A Handbook of Codes, Ciphers, and Secret Writing (2006) by Jenna Lareau (children's)

Samuel Morse, That's Who! (2019) by Tracy Nelson Maurer and el primo Ramón (children's)

Fiction

The Uncorker of Ocean Bottles (2016) by Michelle Cuevas and Erin E. Stead (children's)

Harriet the Spy (2001) by Louise Fitzhugh (children's)

The Haunted Lighthouse (The Code Busters Club) (2013) by Penny Warner (children's)

The Secret Three (1963) by Mildred Myrick (children's)

The Mysterious Message (Geronimo Stilton Micekings) (2017) by Geronimo Stilton (children's)

Printables

Alphabet Cipher Wheel

