

Setup: Fill the lock box with candy. The password is 2175.

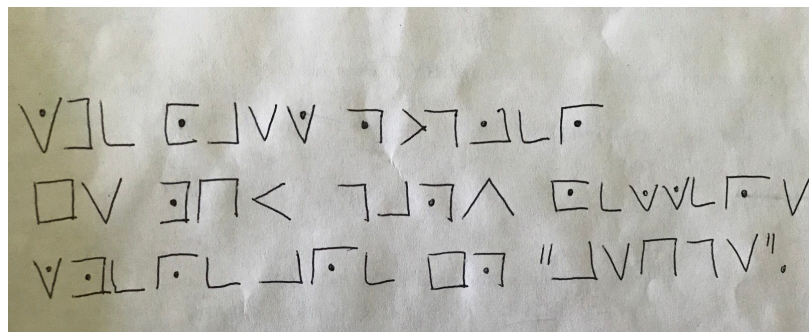
Activity:

1. Start by teaching the kids about both types of “secret codes”
 - a. Caesar's Cipher:
<https://learncryptography.com/classical-encryption/caesar-cipher>
 - b. Pigpen Cipher:
<https://sites.google.com/site/codesforscouts/pigpen>
2. Have the kids try and decode a few messages in Caesar's and in Pigpen
 - a. “SCIENCE”
 - i. Caesar shift with key 13: fpvrpr
 - b. “I LIKE FALL”
 - i. Caesar shift with key 7: P sprl mhss
 - c. Below:

➤ ◻ ◻ ◻ ◻ ◻ ◻ > ◻ ◻ ◻ ◻ ◻ ◻ > ◻ ◻ ◻ ◻ >
X M A R K S T H E S P O T

3. Now challenge them to decode the challenge to open the lock-box. The first person that enters the code on the box gets the prize inside!
 - a. Code: 2175
 - b. First Clue: xewlob yp fyvexdoobc drkd kbo robo
 - i. Key: 10 (“the number of volunteers that are here”)
 - c. Second Clue: rgyz zcu tashkxy ul znoy ekgx.
 - i. Key: 6 (“the last two numbers of this year.)
 - d. Third Clue:
 (“The last number is
how many letters
there are in “Atoms”)

Hand out candy to
all the kids when the
activity is over!



ABCDEFGHIJKLMNOPQRSTUVWXYZ

W

Atoms to Astronauts

Lock Box Activity

- For Caesar's ~~Cipher~~ Cipher, might be as ^{helpful} ~~important~~ to specify to count back
- Pigpen Cipher

↳ The link provided on the document shows the grids:

AB	CD	EF
GH	IJ	KL
MN	OP	QR

ST
UV WX
YZ

↳ But the example messages seem to be decoded using these ones

AJ	BK	CL
DM	EN	FO
GP	HQ	IR

SW
TX VZ
UY

↳ The final clue uses the first set of grids

★ The last word should be "JVTV"

↑ is V on the instructions

