|  |  |
| --- | --- |
| **Lab 3** | **Codes and Cyphers** |
| **Name:**  | **Period:** |

For this lab you will be working to crack secret codes.

1. Describe the difference between codes and ciphers.
2. Morse Code was used for over 100 years and is still sometimes used today. How would you send the following message using Morse Code? (**o** for a dot and **–** for a dash)
	1. **LEE IS MOVING** The answer is:
3. Research the way Julius Caesar sent coded messages to people. He used a box technique and a cipher technique. Then try to solve the following using the **Caesar Box Technique**.
	1. **GTYORJOTEOUIABGT** The answer is:
4. Try using **Caesar’s Cipher** to solve this.
	1. **EQORWVGTU CTG HWP** The answer is:
5. You have received information that the following code is somehow directly related to its name, 1245.

First unscramble the words below. Then look at the unscrambled words in relation to the code name, 1245, to help you determine the rules governing this code.

(1245 Code) **OTDYA IEGTH HSISP ELAEV PSANI**

The answer is**:**

1. Explain the rules about the 1245 Code?
2. New coded message arrives: 132547 Code

**EHFARWS ROTDENC SREONSE LNFOFEI IWNYMAD LNIØSDA**

The answer is:

1. What is the difference between the 1245 code and the 132547 code?
2. What does ASCII stand for?

Tips for deciphering a coded message.

* Find your first letters by looking for the one-letter words, "A" and "I." (If the letter is capitalized and in the middle of a sentence, it's probably an "I.")
* Look for a three-letter combination that repeats throughout the message. Chances are this word is "the."
* A single letter that comes after an apostrophe is probably an "s" or a "t."
* If you're still stuck, try to figure out some of the two-letter words (as, at, if, it, is, of, to, etc.).
* Focus on solving just the first 3 lines to begin. From there you can solve the rest.
1. Using the tips above, see if you can break the code below. You can work with one or more partners.

