Making and Breaking Codes Project

Name:_____Period:_____

Making Codes

1) Based on your understanding of various ciphers, develop unique cipher to use for this project. Your cipher may combine two or more of the simple ciphers discussed in class or may be a completely original creation. Once you have designed your cipher, respond to each of the following questions.

   a) Explain why you chose to design your code the way you did.

   b) Describe and give examples of how you encrypt and decrypt a message using you cipher. *(Use a separate sheet of paper if this space is not sufficient.)*

   c) Describe at least two strengths and two weaknesses of your code. *(Use a separate sheet of paper if this space is not sufficient.)*

2) Create a TYPED plaintext message that is ***at least*** 200 words in length and that is on a separate sheet of paper. Your message MUST describe actions which you will act out for the class.

3) Create a TYPED or NEATLY WRITTEN encryption of the message created in (2). Write your ciphertext on a separate sheet of paper.

Breaking Codes

1) For this portion of the project, you will "intercept" the ciphertext message created by someone else. Your task is to use the strategies which have been discussed in class or which you have discussed in your research to break this cipher. Your first task is to conduct a complete frequency analysis and word break analysis on the ciphertext. Respond to each of the following prompts as you work to break the cipher.
   a) Describe and give a sample of the original coded message. What were your 1st impressions?

   b) Describe the results of analyzing letter and word frequencies and of analyzing word breaks on the coded message.

2) For the next phase, your classmates will act out the contents of the ciphertext message which you intercepted. You will find cribs based upon these observed actions which you will then use to help you further break your ciphertext. Respond to the following prompt.
   a) Explain what cribs you discovered when the message was acted out, and describe what you were able to figure out in the message based on these cribs.

3) For the final phase of the project, you will be given the actual plaintext message that corresponds to the ciphertext message you already possess. Respond to the following prompt.
   a) Describe what you were able to figure out about the code once you received the original plaintext message.