Name: Date: Period:

**Lab: Decoding an Extraterrestrial Message**

**Pre-Lab Discussion**

* You will receive a practice ET message that was invented by on of the SETI scientists. When we find a message from an intelligent civilization, we will need to interpret it!
* What do you need to know about an ET civilization to decode a message from one?
* Currently, SETI scientists are exploring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ frequencies for signs of intelligent life in the universe. They expect a signal of intelligent origin to have a pattern that could not

be made by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occurring object.

* When a message is received, we expect the signal to also include a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, this is information that could help to decode the message.
* How do you translate a radio signal into information that we can interpret?

Listen to the following message. What useful information from the message? Try and detect a pattern.

What are some strategies that we can use to decode the message?

Why would a picture from an extraterrestrial culture be more useful than their printed languages?

**Lab Part I:** Listen to the following message and record your data on the backside, in Data Table 1

**Lab Part 2**: Create your own message to send to another group.

1. Use graph on the backside (Graph #2) to plot out the picture message you will send
2. Translate your picture message to a “boing,” and “click” pattern on another piece of paper
3. Exchange your signal paper with another group and graph their picture
4. After you both graph your message, get back with the group and see if you were able to accurately interpret their message

**Closure:** What did you learn about creating and decoding ET messages through this activity?

**Data Table #1**

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| Record “B” for boing sound, and “C” for clang sound  |

Now, use the strategies to create a picture. Work carefully to translate the boings and clangs into a grid picture. For each boing leave one square blank, for each click fill in one square. Work horizontally, from left to right. Be accurate! One mistake and all the information will be incorrect.

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Graph #2: Your message picture (Remember to count your pieces of information and set-your grid appropriately)

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