Name_____ Period_____ Date_____

Telephone lab

Background information:

The telephone is a device that takes advantage of the way in which waves travel through various mediums. Years ago, all telephones were connected through a land line through which sound waves would travel to the person on the other end. (That is right, no cell phones or cordless phones). A simple way to harness these waves is to make a sound wave travel through a string.

Materials: 2 paper cups, 1 string, one pencil

Procedure:

-poke a hole in the end of each cup

- thread the string through the cup

-Write down a list of things you plan to say (do not show your partner)

-Pull the string tight, and whisper your phrases into the cup.

-Then listen to the phrases of your partner

-Write down what they say

Questions:

1. Write the phrases you plan to say to your partner: be appropriate and write complete sentences.
   a. _____
   _____.
   b. _____
   _____.
   c. _____
   _____.
2. Record the phrases that your partner said according to what you heard.
   a. _____
   _____.
   b. _____
   _____.
   c. _____
   _____.
3. Explain the steps that cause the sound wave to travel from your voice box to your partners ear? Include the terms vibration, and medium.
   _____
   _____
   _____
   _____
   _____
   _____
4. Explain what would happen if someone pinched the string in between the two cups?
   _____
   _____
   _____
   _____

5. Explain what would happen if a bigger cup was used?

_____
_____
_____

6. What would happen if a smaller string was used?

_____
_____
_____

7. If you took two sets of phones and crossed them by making an "X" shape, would all of the people be able to hear the sounds? Why or why not?

_____
_____
_____