Activity 1- Vibrations & Pitch

Describe the difference in the sounds made by the thin and thick rubber bands.

Which one seems to move more quickly? How does the faster movement effect the pitch?

Draw your two different rubber bands used in the activity and sketch what you think sound vibrations would like coming from each one.

Activity 2- Amplification of Sound Through Air

What did you notice about the vibrations when you used the cone as part of your own ear?

How did the cone effect the vibrations made by the rubber band?

What would happen if you could make and even larger cone ear?

Activity 3- Transmitting the Sound Through String

Describe the sound of the slinky without and then with the yarn placed near your ears?

How is the sound vibration traveling to your ear?

Activity 4- Solving Horton's Problem

List the materials you tested below along with how well you could hear the vibration:

Material Tested	**Description of the sound**	**Rate how good the material was on a scale of 1-10 with 10 being best**

Why did some materials work better?

From your list above which material would you recommend that Horton use to allow his friends to hear the Whos?

If you could create device out of any material possible in order to help Horton, what would it be made of and how would it look? Sketch your invention below. Be sure to label the parts and materials that you would use to make the device.

Sample Rubric for the Student Letter to Horton.

	1	2	3
Cause of Sound	Student does not describe how sound is created.	Student explains that objects create sound, but do not connect sound to vibrations.	Student describes that sound is caused by vibrations.
Sound Traveling	Student does not describe how sound can move from an object to an ear.	Student explains that sound travels from an object you your ear, but does not describe how air plays a role.	Student explains that sound travels through air as vibrations move air molecules
Sound Amplification	Student does not describe how sound can be amplified.	Student explains that some objects can make sounds seem louder but does not explain how this happens.	Student explains that a cone shaped object can funnel sound waves into the ear drum.
Recommended Material	Student does not recommend a material or the material does not transfer vibrations.	The material recommended transfers vibrations, but does not transfer the sound very well.	The material recommend allows sound vibrations to be transferred easily.