

# GREAT GONGS



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

OBJECTIVE: Understand how sound is caused by vibrations

A sound is produced when something vibrates.

- Loud sounds are caused by large vibrations, and quiet sounds are caused by small vibrations.
- The pitch (note) changes if the length of the section that is vibrating changes.

## METHODS:

### Materials

- 1 piece of string
- 2 Plastic cups
- 1 large nail
- 1 ruler

### Procedures

1. Put the string through the hole in each cup. Tie one paper clip to the end of the string that is in the cup.
2. Wrap the nail around the middle of the string. Have your partner hold the nail and string tight.
3. Hold the cup to your ear.
4. Have your partner tap the nail with the ruler.
5. Change the location of the nail 4-5 times.
6. Remove the nail from the string. Tighten the string where one person can talk into the cup and the other person listens. Be careful not to pull the string too tight.

## CONCLUSIONS:

1. What did you hear in the different tones? How did they differ
2. How can you make the sound louder?
3. How can you make the sound have a higher pitch each time?
4. How are sound waves formed?

5. How does the ear pick up these sounds?

6. Give three examples of other objects that make a similar sound?