

# Lesson Plan for Science

**Date:** August 30<sup>th</sup>, 2007 (10:30~11:20)

**Place:** Okinawa Education Center

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## TITLE OF LESSON PLAN:

Sound

## GRADE LEVEL:

J.H.S. 1<sup>st</sup> grade

## SUBJECT AREA:

Physics

## OBJECTIVES:

1. The students will be able to understand that sound is caused by **vibration**.
2. The students will be able to understand that sound travels through **solids, liquids and gases**.

## MATERIALS NEEDED:

### Lesson 1: How is sound made?

Activity 1: Playing a straw whistle (a lot of straws, scissors)

Activity 2: Playing a string telephone (a lot of paper cups, strings, toothpicks)

### Lesson 2: How does sound travel?

Activity 3: Two tuning forks on resonance box

Activity 4: A vacuum bell (bells, round-bottom flasks, pinchcock, a vacuum pump)

## GLOSSARY

**Matter**, anything that takes up space and has weight **Vibrate**, more quickly back and forth

**Solid**, a state in which matter has a definite shape and volume

**Liquid**, a state in which matter has a definite volume but no shape of its own

**Gas**, a state in which matter has a no definite shape or volume

## PROCESS SKILLS

**Observing**, use one or more of your senses – seeing, hearing, smelling, touching or tasting – gather information about objects or events.

## PROCEDURE:

### Pre-Learning

#### A. Schema-building

1. As an introduction to the activity, do a **word-association game**.  
[What do you imagine When you hear the word “sound”?]

#### B. Key word

2. **Observing**, use one more of your sense – seeing, hearing, smelling, touching, or tasting – together gathering information about objects or events.

### Learning

## **Lesson 1 How is sound made?**

### **Exploration Activity**

3. Students make **straw whistles** and play them and record their observations.
4. Students play **string telephones** and record their observations.
5. Students **share information** about what they observed and **draw a conclusion** based on evidence and reasoning. **“Sound is made when matter vibrates.”**
6. Students do **self-assessment**.

## **Lesson 2 How does sound travel?**

### **Investigation Activity**

7. Teacher does a **“tuning folks experiment”** and students predict what will happen.
8. Students do a “vacuum bell experiment” whether the sound of bells in the vacuum round-bottom flask can be heard.
9. Students **share information** about what they observed and **draw a conclusion** based on evidence and reasoning. **“Sound travels out in all directions though liquids, solids and gases.”**
10. Students do **self-assessment**.

### **Post-learning**

11. Students answer the review questions.

## **The Review Questions.**

### **Reviewing Science Words and Concepts**

**Write the letter of the word or phrase that best completes each sentence.**

- a. gas
- b. solid
- c. liquid
- d. vibrate
- e. matter

1. To make sound, matter must (\_\_\_\_\_), or move quickly back and forth.
2. In (\_\_\_\_\_) form, matter has a definite shape and volume.
3. In (\_\_\_\_\_) form, matter has a definite volume but no shape of its own.
4. In (\_\_\_\_\_) form, matter has no definite shape or volume.
5. Anything that takes up space and has weight is (\_\_\_\_\_).

### **Chapter Main ideas**

**Write the word that best completes each sentence.**

#### **Lesson 1**

Sound is made when matter (\_\_\_\_\_).

#### **Lesson 2**

Sound travels out in all directions through (\_\_\_\_\_), (\_\_\_\_\_), and (\_\_\_\_\_).