



Energy & Waves: Teacher Tips & Helpful Hints

N.C.S.S: PS.6.3 Understand the properties of waves and the wavelike property of energy in seismic, electromagnetic (including visible light), and sound waves.

- The Student Activity Pack is broken up into two different activities:
 - **Activity 1: Energy and Waves** (PS.6.3.3)
 - **Activity 2: Ear Puzzle** (PS.6.3.3)

Activity 1: Energy and Waves

- Demonstrate how to stretch the balloon over the cups.
- Each student receives extra balloons.
- For **Parts 1 and 2**, when students pull back on the balloon the cup may bend in slightly. As soon as they release it, the cup will return to its original shape.
- For **Part 3** students should be in an area where it is ok to have water.
- There is an *Energy and Waves: Student Activity Sheet* available.
- Teacher Instructions for **Part 4: Wave Simulator** is available.
- There is a separate **Part 4: Wave Simulator: Student Activity Sheet** and **Part 4: Wave Exploration: Student Activity Sheet** available.

Activity 2: Ear Puzzle Activity

- The following resources are available online:
 - Ear Component Functions
 - Completed Ear Puzzle
 - Ear Problems
- **Ear Component Functions** is needed for part 2.
- **Ear Problems** is needed for part 3.
- There is an *Ear Puzzle: Student Activity Sheet* available.

N.C.S.S Clarifying Objectives

- PS.6.3.3 Carry out investigations to conclude the relationship between sound waves (including rate of vibration, the medium through which vibrations travel) and hearing.