

Speed of Sound

Instructor's Handout

1 Educational Objectives

- To help kids understand that sound travels slower than light

2 Preparation

- Before the activity, you will need to find a large area outside (at least a football field's length or so)
- Make sure it is an open area where people could see each other even standing at a distance.

3 Materials

- Two metal pans or any two objects that will make a loud sound when clashed together.

4 Activity Overview

- Have one student stand at one end of the large distance and the other stand at the other end. Make sure the students can see each other.
- One of the two students will have the pans or other objects and the other will be observing.
- The student with the pans will clash them together and the other student will try to notice the difference between when they see the pans being clashed together and when they hear the sound.

5 Notes

- Give all of the kids a chance to participate in each role (clashing and observing) so that they all get the opportunity to see what's going on.
- If they cannot notice a difference in when they see the pans clashing and when they hear the sound, try having the kids move farther apart.
- It might be helpful to mention the example of seeing lightning flash before hearing the thunder as well.
- Reiterate that light travels faster than sound after the activity, and that both travel at a constant rate so it will always be the case that light will be faster.