

DOPPLER BALL ACTIVITY

Materials

- String
- Screw
- Screwdriver
- Tennis ball
- Knife
- Newspaper
- Noise buzzer and batteries
- Rubber bands

Homemade Doppler Ball Assembly

1. Tie the string securely to the screw.
2. Using the screwdriver, attach the screw to the tennis ball.
3. Cut a slit in the tennis ball halfway around the ball on the opposite side of the screw.
Exercise caution when using the knife.
4. Install the batteries into the buzzer and insert it into the tennis ball.
5. Pack the ball with newspaper around the buzzer, leaving the buzzer at the end of the ball.

Activity Instructions

1. When you're ready to start the experiment, turn the buzzer on.
2. Use the rubber bands to seal the ball shut.
3. Holding onto one end of the string, swing the ball in a circle around you. (Make sure you have enough space, so you don't hit anyone or any objects in the area.)
4. Notice how the buzzer sound changes when it moves toward and away from you. Think back to the sound of the ambulance siren in the video.
5. On your Generating Questions handout, answer the questions you had from the ambulance video.
6. Add any new questions you have generated during this activity.

Adapted from: (2016, August 3). Doppler Effect Lab. Study.com. <https://study.com/academy/lesson/doppler-effect-lab.html>.