

<p>75 min</p>	<p>Learning outcomes:</p> <ol style="list-style-type: none"> 1. Determining the speed of sound experimentally 2. Team work and collaboration 3. Assessing experimental data using basic statistical concepts (mode, mean, and standard deviation) 4. Evaluating the precision of experimental data and the appropriate number of significant digits. <p><u>This activity is based on investigation 8.5.1 in the textbook on page 404</u></p>	<p>Materials</p> <ul style="list-style-type: none"> • Clapper • Thermometer • Clipboards • walkie-talkies (optional) • Earplugs • signal flag • stopwatches • 50m measuring tape • notepaper
<p>Minds On... 10 min</p>	<ol style="list-style-type: none"> 1. Teaches asks students: how can we calculate the speed of sound experimentally? What materials are to be used? And receives students' suggestions. 	
<p>Action! 10 min</p> <p>5 min</p> <p>35 min</p>	<ol style="list-style-type: none"> 1. In class: teacher explains to students the lab activity to be performed 2. Lab handouts (copied from page 404-405) are given to students, including handouts for recording data, guidelines for the report and assessment 3. Students are grouped in 4, in each group 2 students will be in charge of creating a sound with the clapper, and the other 2 students will be in charge of measuring the time and recording it into the table provided 4. Students are prepared to exit the building and head towards the playground area where experiment is to be performed 5. In the playground, students take as many measurements as possible, teacher makes sure everyone is on-task and helps with any questions students have. 	
<p>Consolidate Debrief 10 min</p>	<ol style="list-style-type: none"> 1. Experiment is called to an end, 2. Students are asked of the most frequent time they recorded. They are asked about possible reasons for variation in answers if any. 3. Students are informed of the time when the report is due, they are also reminded to consult the report guidelines. 4. Teacher escorts students back to class. 	
	<p><u>Home Activity or Further Classroom Consolidation</u> <u>Prepare the lab report with all analysis outlined in the lab manual. Due in 2 weeks.</u></p>	