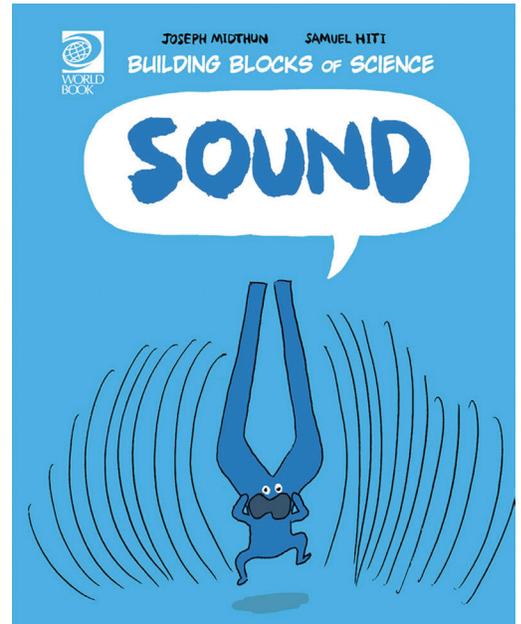


## BUILDING BLOCKS OF SCIENCE

### PHYSICAL SCIENCE

#### LESSON PLAN & GUIDED DISCUSSION

Each of the 10 *Building Blocks of Science* volumes features a whimsical character which guides the reader through a physical science topic. This series is perfect for students across a spectrum of reading comprehension and science mastery levels.



General Information	
<b>Title:</b>	Sound and Rhythm
<b>Materials:</b>	<ul style="list-style-type: none"> <li>• One or three identical glass vases, depending on the size of your class</li> <li>• Water</li> <li>• Ice</li> </ul>
<b>Objective:</b>	Students will explore how sound travels through various mediums and discuss their findings.

Lesson	
<b>Group discussion questions:</b>	<p>Make sure your students have grasped the major concepts of this lesson through an informal group discussion. This is an opportunity for you to highlight the most important points in the book, and try to clarify any uncertainties your students may have. Use the questions below as a guideline but feel free to generate your own!</p> <ul style="list-style-type: none"> <li>• How do people hear sounds?</li> <li>• Is there any sound in outer space? Why or why not?</li> <li>• Does anyone remember what "SONAR" stands for? What kinds of things is sonar used for?</li> <li>• What's the connection between frequency and pitch?</li> </ul>
<b>Procedure</b>	<p>Depending on the size of your class, you can do this activity together as a group or set up three separate workstations.</p> <p>If you set up multiple workstations, put a glass vase or large glass jar on each of the three desks. Leave one empty, fill one with water, and fill the last with ice.</p> <p>Let kids move from one station to next, tapping on each vase with a spoon and listening to the sound it produces.</p> <p>Compare the results and try to draw some conclusions about how sound waves move through different mediums.</p>
<b>Vocabulary for the Word Wall:</b>	<p>As a class, decide on a few vocabulary words that were particularly relevant to this activity. For example,</p> <ul style="list-style-type: none"> <li>• <b>sound wave</b></li> <li>• <b>states of matter</b></li> <li>• <b>echo</b></li> <li>• <b>absorb</b></li> </ul> <p>Pass out a few index cards and ask students to write the vocabulary word on the front of the card and its definition on the back. Students can refer to the glossary on p. 30 as a reference. There are probably not enough words for everyone in the class to make a card so just be mindful that each kid gets a turn at some point during this unit.</p> <p>Post the cards on a "WORD WALL" bulletin board in your classroom.</p>

**Common Core Standards highlighted in this lesson**

**Standards:**

**ELACC4RI1**

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

**ELACC4RI3**

Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

**ELACC4RI4**

Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

**ELACC4SL1**

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.