

Study Exercises: Group B

- In order for sound to travel from one place to another, the space between the two places must contain _____.
- Why is the name *compression* a good name for one part of a sound wave?
- Which of the following are good illustrations of how sound travels? (Only four are good.)
 - A letter is sent by mail.
 - A message is sent to the end of a line of people by passing it orally from one person to the next.
 - A ball is pitched to a person 100 feet away.
 - A row of standing dominoes is caused to fall down by pushing only one domino at the end.
 - Water entering one end of a long hose pushes water out the other end.
 - Lumber is loaded on a truck at one city and hauled to another city.
 - Ripples spread outward from a splash.
- What is the name of the areas in sound waves where the molecules are spread out?
- True or False: Sound travels best through air. Explain your answer.
- No sound can travel through a _____. Why?
- If you hear thunder 8 seconds after you saw a flash of lightning, about how far away would the lightning be?
- If 3 seconds are necessary for an echo to reach the source of a sound, about how far away would the object be that reflected the sound waves?
- What is the speed of sound (in both feet per second and miles per hour) in air? What is the speed of an aircraft that travels twice the speed of sound (in miles per hour)?
- (This exercise is only for students who have studied the unit on light.) Compare light and sound by completing the following chart. Copy the chart, choose the correct answers, and fill in the blank spaces.

	LIGHT		SOUND	
	yes	no	yes	no
Energy				
Its source				
Wavelike travel	yes	no	yes	no
Its speed through a vacuum				
Materials through which it will pass				
Reflected	yes	no	yes	no