

## Lesson 2: What is sound energy?

### Before You Read Lesson 2

Read each statement below. Place a check mark in the circle to indicate whether you agree or disagree with the statement.

	Agree	Disagree
1. The vibrations in materials are responsible for making different sounds.	<input type="radio"/>	<input type="radio"/>
2. The lower the frequency of the wave, the higher the pitch of the sound.	<input type="radio"/>	<input type="radio"/>
3. Decibels are used to measure a sound's intensity.	<input type="radio"/>	<input type="radio"/>
4. When the energy of sound waves is transferred, it becomes electrical energy.	<input type="radio"/>	<input type="radio"/>

### After You Read Lesson 2

Reread each statement above. If the lesson supports your choice, place a check mark in the *Correct* circle. Then explain how the text supports your choice. If the lesson does not support your choice, place a check mark in the *Incorrect* circle. Then explain why your choice is wrong.

	Correct	Incorrect
1. _____ _____	<input type="radio"/>	<input type="radio"/>
2. _____ _____	<input type="radio"/>	<input type="radio"/>
3. _____ _____	<input type="radio"/>	<input type="radio"/>
4. _____ _____	<input type="radio"/>	<input type="radio"/>



**Notes for Home:** Your child has completed a pre/post inventory of key concepts in the lesson.

**Home Activity:** Have your child draw the sound waves of a high-pitched sound and of a low-pitched sound.

Name \_\_\_\_\_

## Reviewing Concepts: Sentence Completion

Complete each sentence with the correct term.

- \_\_\_\_\_ 1. \_\_\_\_\_ is/are a measure of loudness.  
(Frequency, Decibels)
- \_\_\_\_\_ 2. The measure of how fast particles are vibrating is \_\_\_\_\_. (crest, frequency)
- \_\_\_\_\_ 3. The back-and-forth motion of an object is a \_\_\_\_\_. (pitch, vibration)
- \_\_\_\_\_ 4. The greater the frequency is, the higher the \_\_\_\_\_ of the sound. (vibration, pitch)
- \_\_\_\_\_ 5. As \_\_\_\_\_ increases, the sound carries more energy. (frequency, loudness)
- \_\_\_\_\_ 6. The areas where particles are close together are called \_\_\_\_\_. (crests, decibels)
- \_\_\_\_\_ 7. Without \_\_\_\_\_, sound cannot exist.  
(decibels, vibrating particles)
- \_\_\_\_\_ 8. For sound to be heard, \_\_\_\_\_ must first cause the object to vibrate. (speed, energy)

## Applying Strategies: Calculating

Show all work to answer question 9. (2 points)

9. If sound travels at 331 m/s through dry air at sea level and at 1531 m/s through salt water, about how many times faster is sound traveling through salt water?

## Reviewing Terms: Matching

Match each definition or example with the correct term. Write the letter on the line next to the definition or example.

- |  |                              |
|--|------------------------------|
| _____ 1. waves with many frequencies and wavelengths   | a. electromagnetic radiation |
| _____ 2. the combination of electrical and magnetic energy                                   | b. visible light             |
| _____ 3. the small part of the spectrum that you can see                                     | c. prism                     |
| _____ 4. a transparent object that bends light of different wavelengths by different amounts | d. spectrum                  |

## Reviewing Concepts: True or False

Write T (True) or F (False) on the line before each statement.

- \_\_\_\_\_ 5. Light always travels in straight lines.
- \_\_\_\_\_ 6. Light can be bent or refracted when it hits a new material at an angle.
- \_\_\_\_\_ 7. An object in the path of light waves does not cast a shadow.
- \_\_\_\_\_ 8. When light is absorbed, light energy is transformed into stored energy.

## Applying Strategies: Compare and Contrast

Use complete sentences to answer question 9. (2 points)

9. In what ways are sound and light alike and different?

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Name \_\_\_\_\_

## Reviewing Terms: Matching

Match each definition with the correct term. Write the letter on the line next to the definition.

- |  |                   |
|--|-------------------|
| _____ 1. transfer of heat between objects that are in contact                        | a. conduction     |
| _____ 2. the total of all the kinetic and potential energy of the atoms of an object | b. convection     |
| _____ 3. the transfer of heat by electromagnetic waves                               | c. radiation      |
| _____ 4. the transfer of heat by a moving liquid or gas                              | d. thermal energy |

## Reviewing Concepts: Sentence Completion

Complete each sentence with the correct word.

- \_\_\_\_\_ 5. \_\_\_\_\_ is a measure of thermal energy. (Light, Temperature)
- \_\_\_\_\_ 6. When the kinetic energy of atoms increases, thermal energy \_\_\_\_\_. (increases, decreases)
- \_\_\_\_\_ 7. A liquid becomes a \_\_\_\_\_ when its particles have absorbed enough energy to escape the surface. (gas, solid)
- \_\_\_\_\_ 8. Melting ice in your hand is an example of \_\_\_\_\_. (conduction, convection)

## Applying Strategies: Predict

Use complete sentences to answer question 9. (2 points)

9. Predict which way thermal energy will flow when you hold a cup with a hot drink in your hands. Explain.

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