# **Sound Comprehension Check**

For questions 1-3, match each vocabulary term to the correct definition:

|  |  |
| --- | --- |
| 1. Amplitude | a. the highest point of a sound wave that represents where particles in the wave are crowded together |
| 2. Crest | b. the number of sound waves that pass by one point in a given amount of time |
| 3. Frequency | c. the highness or lowness of a sound |
| 4. Pitch | d. the amount of energy in a wave |
| 5. Trough | e. the lowest point of a sound wave that represents where particles in the wave are spread farthest apart |

1. Amplitude –
2. Crest –
3. Frequency –
4. Pitch –
5. Trough –
6. What is sound? What makes sound?
7. Why does sound travel faster through solids and liquids than it does through gas?
8. Use an example to explain how humans hear sound waves as echoes.
9. What is echolocation? How do bats use echolocation to “see?”
10. What are hertz?

# **Sound Comprehension Check**

For questions 1-3, match each vocabulary term to the correct definition:

|  |  |
| --- | --- |
| 1. Amplitude | a. the highest point of a sound wave that represents where particles in the wave are crowded together |
| 2. Crest | b. the number of sound waves that pass by one point in a given amount of time |
| 3. Frequency | c. the highness or lowness of a sound |
| 4. Pitch | d. the amount of energy in a wave |
| 5. Trough | e. the lowest point of a sound wave that represents where particles in the wave are spread farthest apart |

1. Amplitude – d
2. Crest – a
3. Frequency – b
4. Pitch – c
5. Trough – e
6. What is sound? What makes sound?
   1. Sound is a form of energy that comes from objects that vibrate (move back and forth).
7. Why does sound travel faster through solids and liquids than it does through gas?
   1. Sound travels faster through solids and liquids than it does through gas because sound travels best when particles are close together. Particles are the closest together in dense solids. Particles are close enough together in liquids to transmit sound waves, too. Gasses have particles that move more freely. Without plenty of particles close by to vibrate, sound cannot travel well.
8. Use an example to explain how humans hear sound waves as echoes.
   1. Humans can hear sound waves as echoes in certain circumstances. For example, if a human makes a sound in a cave, that sound wave might reflect off a wall and bounce back to the person’s ears a second time, causing them to hear it as an echo.
9. What is echolocation? How do bats use echolocation to “see?”
   1. Echolocation is the use of sound by certain animals to sense their surroundings. Bats, dolphins, and whales use echolocation to navigate and hunt. Surfaces reflect sound waves. Animals that rely on echolocation listen for these reflections and use that information to determine what is in their surroundings.
10. What are hertz?
    1. The frequency of a sound wave is measured in hertz. Most people can hear between 20 and 20,000 hertz, but sounds can reach both lower and higher frequencies than that. Compared to humans, some animals have an ability to hear tones at lower hertz, higher hertz, or both!