

Quiz #6 - Echolocation post test

Name: _____

1. Describe echolocation and how it works.
2. How can echolocation be used to identify how far away an object is?
3. What is the Doppler Effect?
4. Why does the Doppler Effect happen? Please use diagrams.
5. Explain how a sound changes (frequency/pitch) after it has traveled a long distance. Include evidence that you have for this.

For items 3 – 9 please write whether you *strongly disagree*, *disagree*, *neutral*, *agree* or *strongly agree* with each statement.

6. SONAR (SOund Navigation And Ranging) uses different science than echolocation.
7. Dolphins, bats and other echolocating animals can identify the difference between an inanimate object (rock) and a living creature (fish or bug) using only the signal from echolocation.
8. Echolocation is only useful for identifying objects at very close range (20 feet).
9. Sound travels faster in water than in air.
10. Animals such as bats use echolocation alone without sight to locate and consume food.
11. Sounds used to echolocate are very narrowly focused only hitting a tiny area at a time.
12. It is much more challenging to hunt for food in the ocean or in the air since prey can be all around and not just on the ground.
13. Any human can learn how to echolocate.