

Name: _____ Date: _____ Per: _____

Mechanical Waves Escape Room

Go to the following website: [Waves Part 1: Mechanical Waves](#)

Click Begin and follow directions to complete the investigation.

Answer the following questions from the simulation using **blue** font.

1. What causes the waves to form?
2. In _____ mode, the wave is continuous.
3. The green beads move _____.
4. The distance between peaks (wavelength) _____ as the frequency increases.
5. Increasing the amplitude, increases the _____.

From the video:

6. What do waves transport from one place to another? _____
7. What are the two types of waves? _____
8. Sound, earthquakes, and waves in water are all examples of _____ waves.
9. Concerning waves, what is a medium? _____
10. True or False: All mechanical waves require a medium.
11. Can sound travel in space, where there is no matter?
12. What starts a mechanical wave?
13. True or False: The particles of a wave travel long distances.
14. True or False: Waves carry energy.
15. True or False: Waves can carry energy very long distances.
16. What is the code word?
17. From question #4, what is the measurement of the wavelength of the wave?
18. From question #5, what is the measurement of the amplitude of the wave?
19. From question #6, which wave has the highest frequency?
20. What is the code?
21. From question #1, what does this wave carry?
22. From question #2, what is causing this wave?
23. From question #3, what is the medium of this wave?
24. From question #4, which wave has the highest frequency?

25. From question #5, which wave has the larger wavelength?
26. From question #6, which wave has the higher amplitude?
27. What is the code?
28. From question #1, what causes sound waves?
29. From question #2, what happens to the air particles as the sound wave travels through them?
30. From question #3, how does increasing the frequency of the wave affect the pitch of the sound?
31. From question #4, how does increasing the amplitude of the wave affect the pitch of the sound?
32. From question #6, how does increasing the amplitude of the wave affect the volume (loudness) of the sound?
33. What is the code?
34. Paste a screenshot of your signature page below.