Name: DUE DATE – TEST DATE:

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| **Applied Physics**  17 Mechanical Waves and Sound | | | | | evidence and practice  ASSIGNMENT NUMBERS FROM PORTFOLIO EVIDENCE & PRACTICE LOG |
| Status of Standard | | | | |
| Vocabulary is in bold! | | **Not Yet**  *I have no idea what to do.* | **Proficient**  *I can do it with some help and few mistakes.* | **Advanced**  *I can do it correctly and with confidence.* |
| I can… | |
| 1 | Name what causes **Mechanical Waves.** |  |  |  |  |
| 2 | List the three main types of **Mechanical Waves.** |  |  |  |  |
| 3 | Define a **Medium** |  |  |  |  |
| 4 | Define a **Crest** |  |  |  |  |
| 5 | Define a **Trough** |  |  |  |  |
| 6 | Define a **Transverse Wave** |  |  |  |  |
| 7 | Define **Compression** |  |  |  |  |
| 8 | Define **Rarefaction** |  |  |  |  |
| 9 | Define a **Longitudinal Wave** |  |  |  |  |
| 10 | Define a **Surface Wave** |  |  |  |  |
| 11 | Explain what determines the frequency of a wave. |  |  |  |  |
| 12 | Determine how **Frequency**, wavelength, and speed are related. |  |  |  |  |
| 13 | Explain how the **Amplitude** of a wave is related to the wave’s energy. |  |  |  |  |
| 14 | Define a **Periodic Motion** |  |  |  |  |
| 15 | Define a **Period** |  |  |  |  |
| 16 | Define a **Hertz** |  |  |  |  |
| 17 | Define **Wavelength** |  |  |  |  |
| 18 | Determine how **Reflection** changes a wave. |  |  |  |  |
| 19 | Determine what causes the **Refraction** of a wave when it enters a new medium. |  |  |  |  |
| 20 | Name what factors affect the amount of **Diffraction** of a wave. |  |  |  |  |
| 21 | Name the two types of **Interference**. |  |  |  |  |
| 22 | Determine what wavelengths will produce a **Standing Wave**. |  |  |  |  |
| 23 | Define **Constructive Interference** |  |  |  |  |
| 24 | Define **Destructive Interference** |  |  |  |  |
| 25 | Define a **Node** |  |  |  |  |
| 26 | Define an **Antinode** |  |  |  |  |
| 27 | Name what properties explain the behavior of sound. |  |  |  |  |
| 28 | Determine how ultra sound is used. |  |  |  |  |
| 29. | Determine how frequency of a sound changes for a moving source. |  |  |  |  |
| 30. | List the functions of the three main regions of the ear. |  |  |  |  |
| 31. | Explain how sound is recorded. |  |  |  |  |
| 32. | Determine how musical instruments vary in **Pitch** |  |  |  |  |
| 33. | Define **Sound Waves** |  |  |  |  |
| 34. | Define **Intensity** |  |  |  |  |
| 35. | Define a **Decibel** |  |  |  |  |
| 36. | Define **Loudness** |  |  |  |  |
| 37. | Define **Sonar** |  |  |  |  |
| 38. | Define the **Doppler Effect** |  |  |  |  |
| 39. | Define a **Resonance** |  |  |  |  |
|  |  |  |  |  |  |
|  | **END GOAL** |  |  |  |  |
| 40 | Use all the concepts in this unit to describe, analyze, and persist in solving problems |  |  |  |  |