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**6.E.1.3 Sound – Study Guide**

**Directions**: Use multiple resources (flexbook, PowerPoints, learning modules, science website, etc.) to complete the graphic organizer on sound.

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| **Sound: Basics**  What is sound?  What is the speed of sound?  Sound waves are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ waves.  Which is faster (sound/light)? | **Sound and States of Matter:**  Does sound travel faster through a solid, liquid or a gas?  Why is there a difference in speed through different mediums?  Can you hear sound in space? Explain. |
| **Relationships with Sound:**  How is frequency and pitch related?  How is loudness and amplitude related? | **Acoustics**  How can you modify an area to reduce echoes?  Increase loudness? |
| **Doppler Effect:**  *Definition*: The change in \_\_\_\_\_\_\_\_\_\_ due to a moving wave source.  Object moving towards you cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sound.  Object moving away from you cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sound. | **Echolocation and Sonic Boom:**  What is echolocation?  What is sonar?  What is a sonic boom? |
| **Comparisons:**  How are sound, light, and earthquake waves alike? | **Resonance:**  What is resonance? |