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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? |