**Topic Overview: Sound**

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|  | Ref | Outcome | Achieved | ☺ |
| Emerging 1 | E7SpSo1.1 | Explain what causes sounds and how to make louder sounds |  |  |
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| Emerging 2 | E7SpSo2.1 | Explain how sounds gets fainter the further from its source |  |  |
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| Developing 3 | D7SpSo3.1 | Use drawings of waves to describe how sound waves change with volume or pitch. |  |  |
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| Developing 4 | D7SpSo4.1 | Explain observations where sound is reflected, transmitted or absorbed by different media. |  |  |
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| Securing 5 | D7SpSo5.1 | Describe how sound consists of vibrations which travel as a longitudinal wave through substances. The denser the medium, the faster sound travels. |  |  |
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| Securing 6 | S7SpSo6.1 | Know what the amplitude, frequency and wavelength of a wave are |  |  |
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| Mastering 7 | M7SpSo7.1 | Describe the amplitude and frequency of a wave from a diagram or oscilloscope picture |  |  |
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| Mastering 8 | M7SpSo8.1 | Use diagrams to compare the waveforms a musical instrument makes when playing different pitches or volumes. |  |  |
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| Mastering 9 | M7SpSo9.1 | Suggest the effects of particular ear problems on a person's hearing. |  |  |

**Keywords**

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| **Vibration:** A back and forth motion that repeats. |
| **Longitudinal wave:** Where the direction of vibration is the same as that of the wave. |
| **Volume:** How loud or quiet a sound is, in decibels (dB). |
| **Pitch:** How low or high a sound is. A low (high) pitch sound has a low (high) frequency. |
| **Amplitude:** The maximum amount of vibration, measured from the middle position of the wave, in metres. |
| **Wavelength:** Distance between two corresponding points on a wave, in metres. |
| **Frequency:** The number of waves produced in one second, in hertz. |
| **Vacuum:** A space with no particles of matter in it. |
| **Oscilloscope:** Device able to view patterns of sound waves that have been turned into electrical signals. |
| **Absorption:** When energy is transferred from sound to a material. |
| **Auditory range:** The lowest and highest frequencies that a type of animal can hear. |
| **Echo:** Reflection of sound waves from a surface back to the listener. |