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| ***Words to know and spell (Tier 2 Vocabulary)*** | | |
| Vibrate | Air | Medium |
| Ear | Hear | Sound |
| Faint | Loud | String |
| Percussion | Woodwind | Brass |
| Echo | Insulate | Reflection |
| Strength | Instrument |  |

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| ***Words to understand and spell (Tier 3 Vocabulary)*** | |
| **Volume** | How loud or quiet a sound is. |
| **Pitch** | How high or low a sound is. |
| **Tuning fork** | A two-pronged device used to give a note of a specific pitch. |
| **Transverse wave** | Like that seen in water ripples. |
| **Longitudinal wave** | Like that seen in a slinky. |
| **Vacuum** | A space which has no particles in it at all. |

** Science KCV – Sound**

• Know that sound is generated when an object vibrates; some of the energy from the vibrating object is transferred to the air, making the air particles move

• Know that sound is a form of energy that transfers in a longitudinal wave - like that seen in a slinky - not a transverse wave - like that seen in water ripples

• Know that sound travels through a medium (e.g. particles in the air) and thus sounds does not travel through a vacuum which has no particles in it at all

• Know that longitudinal sound waves are detected in the ear by humans and that the brain interprets this as the sounds we hear

• Know that sound travels at different speeds through different objects; it travels at around 340 metres per second in air.

• Know that pitch is how high or low a sound is and that this is determined by how many vibrations per second are being made by the vibrating object; the number of vibrations per second is called frequency

• Know that volume is how loud or quiet a sound is and that this is determined by the amount of energy in the wave

• Know that the volume of a sound is quieter if the listener is further away from the object

• Know about the life of Alexander Graham Bell and why he invented the telephone.

***Key facts to learn:***

• Ask relevant questions and use different types of scientific enquiries to answer them.

• Set up simple practical enquiries, comparative and fair tests.

• Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including data loggers.

• Gather, record, classify and present data in a variety of ways to help in answering questions.

• Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.

• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

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***Key skills to do:***

***Concept check questions. Test yourself:***

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| What is a sound?  How are sounds made?  How do sounds travel?  How do we hear sounds?  How do sounds change?  How can you measure sounds? |
| **Opportunities for Investigation:**  **Comparative Test:** Which material is best to use for muffling sound in a pair of ear defenders? |
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**Year 3/4 – Science – Autumn 1 – Heyford Park School**

**Year 5 – Science – Autumn 1 – Heyford Park School**