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| Science Focus | Sound | Year 4 | Autumn 2 |

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| Key Knowledge | |
| **What is sound?** | **A noise that can be heard by someone.** |
| **How is sound made?** | **A sound happens when something vibrates.**  **This can be obvious:**  **Like when a drill is hitting the ground repeatedly which causes a loud noise**  **This can be less obvious:**  **Here the air in the bottle vibrates to produce the noise** |
| **How does sound travel?** | **Sounds can travel in two ways:**  ** Through the air - like from a TV speaker across the room to your ears**  ** Through an object/material - like stone, brick, water and glass. If someone moves furniture upstairs, the sound can travel through the floor to you.** |
| **How do we hear vibrations?** | ** The vibrating air hits our ear drums and makes them vibrate.**    ** The vibration is picked up by our brains and converted to sounds we recognise.** |
| **Volume** | ** The closer we are to the sound source, the louder the sound will appear to us.**  ** The further away we are from the sound source, the quieter the sound will appear.**  ** The more energy in the initial vibration the louder the sound will be. For example, if you tap a hammer on a desk the sound will be quiet, but if you smash a hammer on a desk it would be much louder.** |
| **Pitch** | **The pitch is how high or low a sound is.**  ** The shorter the vibrating object, the higher the pitch of the sound.  The longer the vibrating object, the lower the pitch of the sound.**  **With string instruments, the tighter the string, the higher the pitch of the sound.** |

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| Key Vocabulary | |
| **Vibrated** | **Move continuously very quickly** |
| **Obvious** | **Clear and easily seen** |
| **Material** | **What something is made of** |
| **Recognise** | **To see or spot something** |
| **Initial** | **Happening at the beginning** |

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| Diagrams and Symbols |
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**Greater Depth Thinking**

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| Possible Experiences |
| ** Use violins in school to experiment with pitch**  ** Use one object (such as a saucepan) and try and create a scale of sounds by manipulating it**  ** Experiment with a tin can telephone** |