# St John Fisher RC Primary School
# Year 4 Knowledge Organiser – Spring One - Science

## What we will be learning

Lesson 1-5
I know:

- A vibration causes sound to travel
- Vibrations that travel through the air or another medium and are heard when they reach an ear
- Sound travels through solids and liquids
- A decibel meter measures sound
- How to carry out an investigation to find the noisiest place at school
- A low pitch describes a low sound and a high pitch describes a high sound

Data Collection B
Lesson 6
I know:

- How to sort information into bar chart or tally chart
- How to analyse information in charts

## Key Facts to Remember

- Sound is made by vibrations: When an object vibrates, it causes particles in the surrounding air (or other materials) to move, creating sound waves.
- Vibrations travel through a medium: Sound travels through air, water, and solids. Without a medium, sound cannot travel.
- Pitch depends on vibrations: The pitch of a sound (high or low) depends on how fast or slow an object vibrates. Faster vibrations create higher pitches, and slower vibrations create lower pitches.
- Volume depends on vibration strength: The loudness (volume) of a sound depends on how strong or weak the vibrations are. Bigger vibrations make louder sounds, and smaller vibrations make quieter sounds.
- Sounds get quieter with distance: As you move away from a sound source, the sound gets quieter because the vibrations lose energy.
- Different materials make different sounds: Objects of different sizes, shapes, and materials produce different sounds because of the way they vibrate.

## Key Vocabulary and Glossary

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| **Amplitude** | The amount of vibrations that a sound makes. |
| **Decibels** | Unit of measurement of how loud a sound is (dB). |
| **Ear** | An organ of hearing in humans and animals. |
| **Eardrum** | A part of the ear which is a thin tough layer of tissue that is stretched out like a drum skin. |
| **Frequency** | The speed of sound vibrations. |
| **High** | Sounds with a high (fast) frequency pitch. |
| **Loud** | A sound with a lot of volume. |
| **Low** | Sounds with a low (slow) frequency pitch. |
| **Pitch** | How high or low a musical sound is. |
| **Sound** | Vibrations that travel through the air that can be heard by an ear. |
| **Vibrate** | The movement of particles back and forth. |
| **Wave** | Vibrations of sound travelling from a source. |

**Key Knowledge:**
Sound is made when objects vibrate, like when a bell rings. These vibrations travel through the air, water, or solids to reach our ears so we can hear the sound. The pitch of a sound depends on how fast or slow something vibrates. For example, a thin string vibrates quickly and makes a high sound, while a thick string vibrates slowly and makes a low sound. The volume of a sound is related to how strong the vibrations are. Strong vibrations make loud sounds, and weak vibrations make soft sounds. As we move further away from the sound source, the sound gets quieter. Different objects make different sounds depending on their size, shape, and material. For example, a metal spoon sounds different from a wooden spoon because they are made from different materials.