

Key Stage: 2

Type: Classroom

Length: 1 1/2 hours

Curriculum links: Science, History

Key Themes: Sound, History, Careers

Learning Objectives:

- Understand how sound is made and how it travels, exploring vibrations, pitch, volume and distance
- Find out how the ear works
- Find out how sound has been recorded throughout history and discover Norfolk Record Office's sound archive.

Time	Activity	Details	Resources	
2 mins	Welcome and Introduction	What are we learning about today?	None	Class
10 mins	Sound at Norfolk Record Office (slides 2 and 3)	Find out about Norfolk Record Office, sound archives, and how sound recordings play a role in preserving history	PowerPoint	Class
10 mins	Sound waves (slides 4 and 5)	Learn about sound waves, and how they relate to vibration Demonstration: sound waves	Slinky, cling film, tuning fork, hundreds and thousands	Class
5 mins	How do we hear? (slides 6 and 7)	Discover how we hear by exploring the inner workings of a human ear Experiment: whispering	PowerPoint None	Class Pairs
10 mins	Amplitude (slide 8) (Slide 9)	Experiment: becoming a sound wave Discover how sound travels through different mediums, and learn why there is no sound in space Demonstration: amplification in a biscuit tin	None None Biscuit tin, tuning fork	Individual Class Class

10 mins	Pitch and frequency (slide 10) (slide 11) (slide 12)	Explore pitch and frequency, listening to examples of musical instruments from around the world, and animal sounds, discussing whether the sounds are high or low pitch Experiment: length of elastic band Understanding Hz Animal noises– which are high and which are low pitch– can you work out which is which	Elastic band, mushroom container Video	Pairs Individual Class Class
10 mins	Decibels (slide 13)	Discuss how loud sounds can damage our ears, comparing decibel levels and discussing how we can protect our ears- rank the decibel level in order and feedback Experiment: Use a decibel meter to measure sounds made by the class to explore amplitude	Decibel meter	Pairs Class
20 mins	Sound Mapping (slide 15)	Experiment: sound mapping Children to focus on the sounds around them and log the sounds in a 'sound map'. Discuss what they hear and consider distance and direction when creating their sound maps.	Blank sound map and pencils	Pairs
10 mins	Recording sound (slide 17)	Learn about Thomas Edison who discovered how sound could be recorded and look at different examples of audio formats from throughout history, seeing real examples from the Norfolk Record Office handling kit.	Handling kit	Class