



Medium Term Unit Planning

Topic Name: - “Listen Up!”

Learning outcome:

Brief description of key takeaways:

- identify how sounds are made, associating some of them with something vibrating
- recognise that vibrations from sounds travel through a medium to the ear
- find patterns between the pitch of a sound and features of the object that produced it
- find patterns between the volume of a sound and the strength of the vibrations that produced it
- recognise that sounds get fainter as the distance from the sound source increases

Hook:

A silent sound walk around various parts of school.

Topic Showcase (e.g. display, museum, performance, presentation)

Children will be able to present their understanding of sound through a display.

Oracy:

Children to articulate their understanding of sound, including how it is made and how it travels.

Key Vocabulary:

Sound, listen, hear, ears, noise, loud, quiet, silent, vibrations, transmit, medium, air, water, solid, source, sound waves, particles, travel, volume, loudness, amplitude, pitch, frequency, sign language, investigation, fair-test, factor (variable), prediction, results, resources, planning, muffle, evidence, conclusion and evaluate.

Key Texts (whole class reading/end of the day book/Talk for Writing Texts etc.)

Links to previous texts – Sounds All Around by Wendy Pfeffer



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Citizenship/Community Opportunities:

(Focus – change in attitude/increase knowledge and awareness/make a difference)

To form an understanding and appreciation that sound can affect different people in different ways and what they can do to reduce the impact sound can have, whilst sharing their knowledge to others.

Experiences/Visits/Visitors

Trip to the Think Tank Birmingham

Main Subjects covered:

Science

Music

Design and Technology

Subject 1 Threshold concepts

Science – Investigate sound and hearing

This concept involves understanding how sound is produced, how it travels and how it is heard.

Notes:

Lesson title and learning Intention	Threshold concepts (success criteria)	Milestones (success criteria)	Lesson structure/differentiation
1. "Sound Walk." Go on a 'sound walk' through the school and begin to think about how sound is made.	Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.	<ul style="list-style-type: none"> • Ask relevant questions. • Gather, record, classify and present data in a variety of 	<ul style="list-style-type: none"> • Discuss together which areas of the school will be quiet, which will be loud, which will have no sound at all.



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		<p>ways to help in answering questions.</p> <ul style="list-style-type: none"> • Identify differences, similarities or changes related to simple, scientific ideas and processes. • Use straightforward, scientific evidence to answer questions or to support their findings. • Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. 	<ul style="list-style-type: none"> • Walk around the school listening for different sounds. Children will sit quietly in an area of the school whilst listing all the sounds they can hear. • Begin to consider sound and how sounds are made. Discuss in the classroom the surroundings and how they could have had an impact on the sounds they were hearing (open spaces, walls creating an echo, etc.) • Understand the term 'noise pollution' through a class discussion.
<p>2. "Good Vibrations." Explore sound further and investigate vibrations and how sound travels.</p>	<p>Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> • Ask relevant questions. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Identify differences, similarities or changes 	<ul style="list-style-type: none"> • Learn through watching a video on how sound is made and highlight that there are many kinds of sound and that there are many ways of making sound. • Understand that sound is made by vibration from



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		<p>related to simple, scientific ideas and processes.</p> <ul style="list-style-type: none"> • Use straightforward, scientific evidence to answer questions or to support their findings. • Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. 	<p>a source. Children all place their heads on the desks listening out for a sound generated by the teacher somewhere in the room, children point to where they think the sound has come from and what caused it, e.g. vibrations from the desk.</p> <ul style="list-style-type: none"> • Research how sound travels. • Know that sound travels through different mediums, including air, water and solids. • Recognise that sounds get fainter as the distance from the sound source increases. • Children create their own string telephones.
<p>3. "Pitch and Volume." Investigate pitch and volume by exploring instruments and the different sounds they make.</p>	<p>Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> • Use straightforward, scientific evidence to answer questions or to support their findings. • Make accurate measurements using standard units, using a range of equipment, 	<ul style="list-style-type: none"> • Understand that sound is a form of energy and know that the more energy that is put into creating a sound, the louder the sound that is made. • Look for patterns between the pitch of a



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		<p>e.g. thermometers and data loggers.</p> <ul style="list-style-type: none"> • 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, bar charts and tables 	<p>sound and features of the object that produced it.</p> <ul style="list-style-type: none"> • Begin to see a pattern between the pitch and volume of a sound and the shape of the wave it produces.
<p>4. "Pardon?" Understand how we hear sounds and begin to consider ways to reduce what we can hear.</p>	<p>Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> • Ask relevant questions. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Identify differences, similarities or changes related to simple, scientific ideas and processes. • Use straightforward, scientific evidence to answer questions or to support their findings. • Identify how sounds are made, associating some 	<ul style="list-style-type: none"> • Begin to understand some of the workings of the human ear. • Consider some of the ways we try to reduce the sounds that we hear. • Understand that we hear because sound waves (vibrations) enter our ears. • Explain why we see lightning before we hear thunder.



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		<p>of them with something vibrating.</p> <ul style="list-style-type: none"> • Recognise that vibrations from sounds travel through a medium to the ear. 	
<p>5. "Sssshhhhhh!" Plan and conduct an investigation into which material best reduces the sounds we hear.</p>	<p>Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> • Ask relevant questions. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Identify differences, similarities or changes related to simple, scientific ideas and processes. • Use straightforward, scientific evidence to answer questions or to support their findings. • Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibrations from sounds 	<ul style="list-style-type: none"> • Consider reasons needed to reduce sounds and reasons for not reducing sounds. • Work in a group to plan an investigation that will find out which material will best reduce sound • With help, consider the different variables of their test and plan how to ensure their investigation is fair • Record the results of the investigation and use the results to draw a conclusion



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		<p>travel through a medium to the ear.</p>	
<p>6. "The Rock Star Challenge." Present your ear defenders design, and explain your findings.</p>	<p>Investigate sound and hearing This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> • Ask relevant questions. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Identify differences, similarities or changes related to simple, scientific ideas and processes. • Use straightforward, scientific evidence to answer questions or to support their findings. • Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. 	<ul style="list-style-type: none"> • Describe their sound muffling product to a panel (teachers) • Demonstrate their understanding of sound by explaining why their product is the best • Provide evidence to show that the results of their product testing came from a fair test • Present their findings to a panel of judges • Evaluate their product against the original criteria