



ART	D&T	Geography	History	ICT	MFL	MUSIC	PE & SPORT	PSHE/SMSC	RE	SCIENCE
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	Learning Objective and Success Criteria	Learning Tasks & Activities	Resources/ICT	Links to the Arts
1	<p>L.O. I can discuss how sound is made.</p> <p>Success Criteria:</p> <p>I must be able to identify how sounds are made.</p> <p>I could associate some sounds with something vibrating.</p>	<p>Starter: Mixed ability groups with large paper on each table. Do not speak (unless absolutely necessary).</p> <p>Sound the gong and point to the board. Go through PP silently. Move around the class and make a mental note of some of the areas the children think will be particularly loud or quiet and make sure to take them to those areas. Have a signal prepared for the 6th slide. (Do not show the final 2 slides until the plenary). Hand out sound sheets for our sound walk.</p> <p>Main Activity: As quietly as possible, chn move as a class to different areas of the school. They should sit when you indicate and complete a sound sheet for that area. No discussions.</p> <p>If a sound is heard but is from an unknown source, explain that they should try to describe it (loud, soft, mechanical, natural, repeating, one-off) and make a sensible guess as to what made the sound.</p> <p>Plenary: Hand chn an instrument. Indicate that they should sit down. Allow them 1 minute to make noise! They can speak to the people around their table and use their instrument to make sounds. Sound the gong for silence. Can they explain how their instrument makes noise? Does it need to be hit, shaken, blown, scraped, plucked? Feedback about which sound they like the most – why? Is it because it's loud, soft, interesting? Look out for any chn already using terms such as pitch or volume. Briefly discuss the Sound Walk and explain that there are very few places in this world that are completely silent. Move to slide 7, allow them a minute to discuss it. Noise can be such a problem in some areas that it is considered pollution. People are employed to monitor noise levels to make sure they are not too loud or a nuisance. Show the final slide. Sometimes noise is so loud we need to protect our ears.</p>	<p>sound, listen, hear, ears, noise, loud, quiet, silent, vibrations</p> <p>PP</p> <p>Sound sheet</p>	<p>Listen to different types of music on Spotify.</p> <p>Collect junk material for final lesson to make own instrument.</p>

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2	<p><u>L.O. I can begin to understand that we hear sounds when the vibrations travel.</u></p> <p>Success Criteria:</p> <p>I must identify how sounds are made.</p> <p>I should be able to associate some of them with something vibrating.</p> <p>I could recognise that vibrations from sounds travel through a medium to the ear</p> <p>I could recognise that sounds get fainter as the distance from the sound source increases</p>	<p>Starter: Children sit silently, head resting on their desk, eyes shut. If they are tapped on the shoulder they should knock gently on the table. The rest of the class, without looking, point in the direction of sound. Chn hold their ‘points’, are they all pointing in the same direction? Repeat with a softer sound. Did everyone get the correct general direction? How did we know where the sound was coming from? We heard it through our ears. How did the sound travel from the source to our ears? Assess chn’s prior knowledge – do they have any misconceptions?</p> <p>Select 1 child from each table to strike the tuning fork against the side of the desk and gently place the vibrating end on the water in the centre of the bowl. The others around the table should watch and explain what they could see. Explain that the tuning fork is vibrating and the ripples move outwards from the sound source (the fork). This is how sound travels, by causing the particles around the vibrating source to vibrate, which in turn vibrate other particles, sending a ripple away from the vibrating sound source. Watch clip.</p> <p>Main Activity:</p> <p><i>Independent-</i> String telephone: Children make their own string telephones in pairs using the instructions from the session resource. Ensure children understand that the sound travels along the string (solid).</p> <p><i>Guided-</i> Discuss how sound travels to our ears. It moves by sending vibrations through a medium. We usually hear sounds that have travelled through the medium of air, but sound can also travel through liquids and solids. Follow notes in the session resources. Demonstrate the use of scientific language when explaining how sound travels and encourage it in the responses from the children.</p> <p>Plenary: Ask the chn for feedback about the string telephones. Can they explain, using scientific language discussed in the input, how the sound travelled?</p>	<p>sound, transmit, medium, air, water, solid, vibrations, source, sound waves, particles, travel</p> <p>PP</p>	<div style="border: 1px solid black; padding: 5px;"> <p>https://www.bbc.co.uk/bitesize/topics/zgffr82/articles/zstr2nb</p> </div>

	Learning Objective and Success Criteria AT1 Investigative Objectives	Learning Tasks & Activities	Resources/ICT	Links to the Arts
3	<p><u>L.O. I can begin to understand that sounds can vary by pitch and volume.</u></p> <p>Success Criteria:</p> <p>I must be able to find patterns between the pitch of a sound and features of the object that produced it.</p> <p>I could find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>I can ask relevant questions</p> <p>I can make systematic and careful observations</p> <p>I can report on findings</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p>	<p>Starter: Chn to an instrument from a selection. Allow them 1 minute to work out how they work in case it's not obvious. Ask them all to make a quiet noise with their instrument. Stop. Now ask them to make a loud noise with their instrument. Stop. What did they have to do differently to make a louder noise? Hit it harder, blow it harder, pluck it more firmly?</p> <p>Main activity: Sound is a form of energy and if we put more energy into making the noise then the noise will be louder. The size of the object vibrating will also affect the volume (amplitude/volume) – a large drum will be louder than a small drum. Introduce the idea of pitch. Has anyone heard of it before? The size, length and tightness of the object that is vibrating will affect the pitch of the sound it produces. Choose 5 chn with a range of instruments to stand up and, one at a time, play one note on their instrument. Can the rest of the class sort them in order of pitch, from low to high? Suggest making the string longer and plucking it harder, and ask what do other children predict will happen to the note (longer string – lower pitch). Discuss how the sound box of a guitar or violin amplifies the sound. How do you make a note louder or softer? Ensure children use the correct vocabulary. Look at a range of percussion instruments – how do you change the loudness of the sound produced? Can you change the pitch? Go through sound sheet to explain the process.</p> <p>Plenary: Children share their findings from the Independent activity with the rest of the class. How does the instrument make sounds - is it a wind instrument, a string instrument or a percussion instrument? Discuss what children have discovered about changing loudness and pitch of sounds.</p>	<p>sound, volume, loudness, amplitude, pitch, soundwave, frequency</p> <p>PP</p>	<p>https://www.bbc.co.uk/bitesize/clips/ztptsbk</p>

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4	<p><u>L.O. I can investigate sound-proofing materials by planning and conducting a fair test.</u></p> <p><u>Success Criteria:</u></p> <p>I must be able to recognise that vibrations from sounds travel through a medium to the ear.</p> <p>I should be able to recognise that sounds get fainter as the distance from the sound source increases.</p> <p>I can set up simple practical enquiries, comparative and fair tests</p> <p>I can make systematic and careful observations</p> <p>I can report on findings from enquiries</p> <p>I can use results to draw simple conclusions</p>	<p>Starter: Children decide if the statements on PP are true or false. Share the answers and ask the children to discuss the correct versions of the false statements.</p> <p>Discuss a fair test with demonstration. (it is hard to make this sort of investigation a truly fair test – however the children can still find patterns in the results).</p> <p>Discuss why we may need to absorb sound. Take suggestions and explain the ideas on the PP.</p> <p>https://www.twinkl.co.uk/resource/tp2-s-155-new-planit-science-year-4-sound-lesson-5-sound-proofing-lesson-pack</p> <p>Main activity: Investigation.</p> <p>A band have asked the chn to select the best material to soundproof their studio. Chn test the different materials using the method described on the PP. If you have access to data logging equipment, you may wish the children to use it to measure the loudness of the music with each material.</p> <p>Alternatively, the children can listen and describe the loudness. Children record their measurements or descriptions on the Soundproofed Studio Sheet.</p> <p>Discuss which materials were good at soundproofing the studio. Look for children who can successfully conduct the investigation, and can identify the best material for absorbing sound.</p> <p>Plenary: Children write a letter to the band with their conclusion, recommending the best material to use to soundproof the studio and explaining why it is the best choice.</p>	<p>investigation, fair-test, factor (variable), prediction, results, resources, planning, muffle</p> <p>Lesson 5 Twinkle PP</p>	<p>https://www.stem.org.uk/resources/elibrary/resource/32039/how-muffle-sound</p>

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5	<p><u>L.O. I can design and make a musical instrument that plays sounds.</u></p> <p>Success Criteria:</p> <p>I must be able to find patterns between the pitch of a sound and features of the object that produced it.</p> <p>I should be able to make a musical instrument and explain how it works.</p>	<p>Starter: Children complete their Sound Q and A by interviewing their classmates to gather answers as described on the PP.</p> <p>Main activity: Introduce the musical instrument challenge described on the PP and show the children the equipment and junk materials they can use to make their instruments. Children discuss their first ideas with a partner. Show clip so children can collect ideas by watching the band in the clip describe how they created their musical instruments using junk materials. https://www.twinkl.co.uk/resource/make-a-musical-instrument-activity-t2-t-10000420</p> <p>Children to design their musical instrument, then use the junk materials and other equipment to make it. Look for children who deliberately design their musical instrument so that it will play different sounds.</p> <p>Children test their musical instruments out. They work in pairs, explaining to each other how their instruments work and make different sounds. Children to evaluate their instrument, explaining how their instruments work. Look for children who can explain how their musical instrument can change pitch and loudness, and how it creates different sounds.</p> <p>Plenary: Ask the whole class to play different notes on their instruments and explain using the correct vocabulary what is happening.</p>	<p>Twinkle PP Making Music</p>	<p>https://www.bbc.co.uk/bitesize/clips/z32qxn</p> <p>Weapons of sound.</p>