Foundation subject lesson – Science

Year Group: Year Four
Question: Sound – can you hear that?

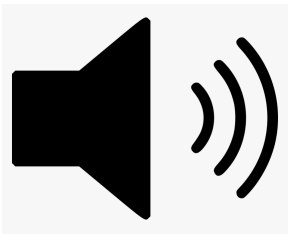
Learning Objectives	Key Resources/stimuli
• **identify how sounds are made, associating some of them with something vibrating** • **recognise that vibrations from sounds travel through a medium to the ear** • **find patterns between the pitch of a sound and features of the object that produced it** • **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**	String Telephone Investigation Video Posters

Key facts	Key vocabulary	
Sound occurs as a result of vibrations. Invisible sound waves travel through the air to the air. Signals sent to the brain and 'message' is decoded as sound. Pitch is how high or low a sound is. The larger the object, the lower the pitch. Volume is the loudness of a sound. The larger the distance, the quieter the sound. The shorter the distance, the louder the sound.	sound vibrations waves travel invisible pitch	volume ear signals messages brain decode

1. What is sound?
Children listing examples of sound, exploring how sound is made and explaining how we hear sound.

Review a range of instruments, comment on their sound and what might affect it.

Sound



5. How does sound change in water?

Predict and evaluate how different animals might hear sounds. What adaptations and differences do we notice?

Children to listen through a bottle underwater to a triangle. Compare underwater to outside.

2. Pitch and volume
Children to complete a carousel containing bottles, tuning forks, rice drums and rulers. Children to observe the differences in sounds and begin to reflect on what will impact the pitch of sounds.

4. Impact of distance on sound.
Children to investigate the effect of distance on sound.

To walk away from a speaker at set distances and record in db the results on a

3. String Telephone Investigation
Use previous knowledge to understand how string telephones work. What are the factors that affect the sound quality of a string telephone?

Knowledge, Skills and Understanding breakdown for Science			
Year Four			
	Planning	Obtaining and presenting evidence	Considering evidence and evaluating
Expected	•Can they set up a simple fair test to make comparisons? •Can they plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated? •Can they suggest improvements and predictions? •Can they decide which information needs to be collected and decide which is the best way for collecting it? •Can they use their findings to draw a simple conclusion?	•Can they take measurements using different equipment and units of measure and record what they have found in a range of ways? •Can they make accurate measurements using standard units? •Can they explain their findings in different ways (display, presentation, writing)?	•Can they find any patterns in their evidence or measurements? •Can they make a prediction based on something they have found out? •Can they evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables? •Can they use straightforward scientific evidence to answer questions or to support their findings? •Can they identify differences, similarities or changes related to simple scientific ideas or processes?
Year Four (Challenging)			
Exceeding	•Can they plan and carry out an investigation by controlling variables fairly and accurately? Can they use test results to make further predictions and set up further comparative tests?	•Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models?	•Can they report findings from investigations through written explanations and conclusions? •Can they use a graph or diagram to answer scientific questions?