

Bat Lesson Plan

YEAR 4 SCIENCE: SOUND



Cross curricular links	Curriculum objectives National curriculum 2014	Learning Intention	Teacher notes	Resources	Assessment opportunities
<p>Maths Measuring</p>				<p>Slide 1 Bat lesson for Year 4 science: sound</p>	
	<p>Sound</p> <ul style="list-style-type: none"> • 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 • recognise that sounds get fainter as the distance from the sound source increases. 	<p>Can I recognise how sound is made using vibrations and how it travels?</p>	<p>Activity 1: When working on the topic of sound in year 4, turn off the lights to make an area of the classroom/suitable area of the school dark. Turn on the torch and see what it is shining on. Remind the children of Year 3 work on light and that the light from the torch travels through the air, bounces back off the object and into their eyes.</p>	<p>Slide 2 Bats are nocturnal</p> <p>Activity 1</p> <p>Slide 3 Contrary to popular belief...</p>	
		<p>Can I understand how bats use sound to travel and how the pitch of the sound they make cannot be heard by the human ear.</p>	<p>Discuss the difficulty for bats in catching their prey. They are nocturnal and so cannot see where their prey is and so use echolocation to tell them where their prey is and locate obstacles in their way.</p>	<p>Slide 4 Bats are mostly active at night...</p> <p>Worksheet 1 Seeing with sound</p> <p>Slide 5 & 6 YouTube clips explaining echolocation. You may wish to watch both or select to show your favourite.</p>	<p>Children understand how sound travels as vibrations and how the pitch of some sounds are not audible to the human ear.</p>

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			<p>Go to an area where you have a large space and can test echoes. Discuss what they notice. Explain that their voices have travelled to the wall/ceiling and then travelled back to their ears. Explain that the pitch of a bat's voice is very high and that we cannot hear it without a bat detector.</p> <ul style="list-style-type: none"> • Torches • Dark room • Large room for echoes <p>http://www.bats.org.uk/pages/listen_to_and_watch_bats.html</p>	<p>Slide 7 What do bat calls sound like?</p> <p>Activity 2</p> <p>Worksheet 2 Investigating sound</p> <p>Hall Exercise</p>	
		Adaptation, PE		<p>Activity 3 Bat & moth game (PE lesson) in hall</p>	
		Can I recognise how the shape of the ear can aid the collection of sound?	<p>Ear size and shape matters</p> <p>Ask the children to look at different species of bat. Look at the different shapes of the different bats ears and discuss why they are shaped as they are. Look at ear trumpets and how we cup our ear to better capture sounds.</p>	<p>Slide 8 Ear size and shape matters</p> <p>www.nationaltrust.org.uk/features/our-guide-to-the-uks-bats</p> <p>Activity 4 Ears – does design, shape and size matter?</p>	

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	<p>Design and Technology</p> <p>Design use research and develop design criteria to inform the design</p> <p>Make select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>			<p>Slide 9 Ear size and shape do matter!</p> <p>Activity 5 Make your own bat ears</p> <p>Alternatively student may choose to use previously designed mask of different species with different shaped ears.</p> <p>- or - Activity 6 Bat masks</p>	<p>Children can choose and select appropriate materials.</p> <p>Children can design a product based on their knowledge and understanding and explain their choices.</p>