

## NSW Year 7-10 (Stage 4 & 5) Science Outcomes for Strike a Chord

### Stage 4

Strike a Chord exhibit	Objectives Students will learn about:	Skills outcomes
All exhibits	4.6.4 sound energy to:	a) describe sound as a form of energy requiring a medium for propagation b) identify a variety of energy transformations in everyday devices involving either electrical, sound, light and/or heat energy.
Hearing Range Ear Relay Sounds Strange	4.8.5 humans to:	a) describe the role of the digestive, circulatory, excretory, skeletal and respiratory systems in maintaining humans as functioning organisms.
All exhibits	4.12 technology to:	a) identify a variety of energy transformations in everyday devices involving either electrical, sound, light and/or heat energy.
All exhibits and Strike a Chord classroom activities	Domain: Skills A student: 4.14 follows a sequence of instructions to undertake a first-hand investigation 4.17 evaluates the relevance of data and information 4.18 with guidance, presents information to an audience to achieve a particular purpose 4.19 draws conclusions based on information available 4.21 uses creativity and imagination to suggest plausible solutions to familiar problems 4.22 undertakes a variety of individual and team tasks with guidance	
All exhibits and Strike a Chord classroom activities	Domain: Values and Attitudes Objective: Students will develop positive values and attitudes towards themselves, others, learning as a lifelong process, science and the environment. A student: 4/5.25 recognises the relevance and importance of lifelong learning and acknowledges the continued impact of science in many aspects of everyday life 4/5.26 recognises the role of science in providing information about issues being considered and in increasing understanding of the world around them	

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All exhibits	<p><b>Optional content for Stages 4 could provide students with opportunities to:</b></p> <p><b>Wave models</b></p> <ul style="list-style-type: none"><li>• discuss similarities and differences between transverse and longitudinal wave models</li><li>• relate the speed of light and sound to their frequency and wavelength</li><li>• compare different types of radiation making up the electromagnetic spectrum in terms of frequency, wavelength and energy</li><li>• design and describe ways of enabling or impeding energy transfer by waves</li><li>• describe quantitatively features of waves including frequency, wavelength and speed using <math>v=f\lambda</math></li></ul> <p><b>Multicellular organisms – humans</b></p> <ul style="list-style-type: none"><li>• identify the separate components of the digestive, respiratory, excretory, circulatory, skeletal, nervous and/or endocrine systems and describe the function of each</li></ul>
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### Stage 5

Strike a Chord exhibit	Objectives Students will learn about	Outcomes
Hearing Range Ear Relay Vocal Vowels	5.8.4 humans to:	a) describe the role of, and interaction between, coordination systems in maintaining humans as functioning organisms
All exhibits	5.12 technology to:	c) describe some everyday uses and effects of electromagnetic radiation, including applications in communication technology
All exhibits and Strike a Chord classroom activities	Domain: Skills A student: 5.17 explains trends, patterns and relationships in data and/or information from a variety of sources 5.19 uses critical thinking skills in evaluating information and drawing conclusions 5.21 uses creativity and imagination in the analysis of problems and the development of possible solutions 5.22 plans, implements and evaluates the effectiveness of a variety of tasks independently and as a team member	
All exhibits and Strike a Chord classroom activities	Domain: Values and Attitudes Objective: Students will develop positive values and attitudes towards themselves, others, learning as a lifelong process, science and the environment. A student: 4/5.25 recognises the relevance and importance of lifelong learning and acknowledges the continued impact of science in many aspects of everyday life 4/5.26 recognises the role of science in providing information about issues being considered and in increasing understanding of the world around them	
All exhibits	<b>Optional content for Stages 4 could provide students with opportunities to:</b>  <b>Wave models</b> <ul style="list-style-type: none"> <li>• discuss similarities and differences between transverse and longitudinal wave models</li> <li>• relate the speed of light and sound to their frequency and wavelength</li> </ul>	

## NSW Year 7-10 (Stage 4 & 5) Science Outcomes for Strike a Chord

- compare different types of radiation making up the electromagnetic spectrum in terms of frequency, wavelength and energy
- design and describe ways of enabling or impeding energy transfer by waves
- describe quantitatively features of waves including frequency, wavelength and speed using  $v=f\lambda$

### **Multicellular organisms – humans**

- identify the separate components of the digestive, respiratory, excretory, circulatory, skeletal, nervous and/or endocrine systems and describe the function of each