

Exhibit Descriptions for Strike a Chord—The Science of Music

	Exhibit Message	Exhibit Description
Exhibits for <6 years		
Tot Spot		A series of percussion instruments lining the wall allow young children to explore vibrations and sound.
Interactive Exhibits		
Air Jammin'	Pretend to be a famous musician by 'playing' household items like musical instruments. Allows visitors to play with tempo and think about the psychology of celebrity.	Specially altered household items such as an ironing board and broomstick have sensors linked to computers playing music. Visitors 'strum' across their broom guitar or 'play' the ironing board keyboard individually or together (or not!) as a pretend band.
Compose a Classic	The brain prefers to hear certain endings in a melody. This exhibit is based on Mozart's dice game.	Visitors place four blocks of music onto a platform and press 'Play' to hear the tune they have created. Each block has a different tune on each side, allowing the possibility of 6122 different melodies.
Drum Dance	Changing the frequency of a vibrating drum membrane shows how wave patterns form, including special waves called standing waves.	<i>Drum Dance</i> contains a vibrating stereo speaker with a membrane stretched across the top, like a drum. By adjusting the frequency of the speaker, you can see different wave patterns move across the membrane and observe wave nodes and antinodes.
Ear Relay	Tiny hairs lining the inner ear canal bend in response to sound vibrations.	A model ear allows visitors to explore how the ear (and particularly the cochlea) responds to sound vibrations and converts the vibrations into nerve signals that allow the brain

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		to interpret and 'hear' sound waves.
Floor Piano	Compose with your feet! This is a fun way of discovering musical notation.	A large scale keyboard along the floor is matched with a screen showing music notes. As visitors step on each key, they hear and see a note.
Good Vibrations	Sound is created when material such as air or solids vibrate. As well as hearing sound vibrations, we can feel them through our body.	Visitors lie back on a reclining chair and change the volume and bass level of a soundtrack played in speakers embedded in the chair. They can compare how the vibration frequency changes with pitch.
Hearing Range	Humans are able to hear a certain range of sound frequencies. This range changes with age and is quite different to the hearing ability of other animals.	As a visitor changes the frequency or pitch of a tone, they check the highest and lowest-pitched note they are able to hear. This exhibit also compares hearing ability to people of different ages as well the hearing ability of a bat or an elephant.
Invent an Instrument	Varying the length of pipes and the press of air passing through the pipes creates musical notes of different pitch.	Visitors can build and play their own wind instrument consisting of one or more different pipes, then blow compressed air through the pipes and hear it being 'played'.
Light Harp	Demonstrates how light energy can be changed into sound energy.	Users wave their hands inside a space containing light beams. As the light beams are broken, a computer registers this and plays synthesised musical instruments (which can also be selected by the visitor).
Movie Moments	Music has a powerful emotional impact, which is used to full effect by movie directors. What happens when the music soundtrack	Users watch different movie clips accompanied by different music soundtracks that affect the mood of the movie. Do some combinations of movie and music seem to be better than others?

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	doesn't match the footage you're watching?	
Music Factory	Music producers or mixers match digital music tracks to create melodies.	Visitors can compose their own music using digital files on a touch screen. The graphic panel describes Thomas Edison's first analogue recording and the nature of digital music files.
Musical World	Nursery rhymes for young children exist in many countries around the world. They have similar musical structures such as simple melodies and rhythm.	Visitors choose songs from various countries on a world map. When they listen through the earpiece, they can hear a nursery rhyme from that particular country.
Pentaphone	The same pitched note sounds different when played on different instruments (xylophones) due to musical timbre.	Five xylophones made from different materials, but spanning the same range of notes (known as a pentatonic scale) can be played by visitors. Notes can be played and compared on each pentaphone to compare how they sound (their timbre).
Pipe Play	Sound waves vibrate at different speeds or frequencies. Sometimes, waves	<i>Pipe Play</i> consists of a glass tube which contains kerosene which reacts fluidly to sound vibrations. At certain musical notes, you can see the kerosene move intriguingly to demonstrate standing waves in wind or brass instruments.
Pizzicato Piano	The length of a piano's string determines the pitch of a note when the string is hit or plucked.	Visitors can pluck piano strings of different length and discover how shorter strings produce higher pitched notes, while longer strings produce lower pitched notes.
Seeing Sound	Sound can be seen as waves on an oscilloscope screen. Noises including the human voice contain more than one frequency.	By recording whistles, words and songs of different pitch and volume, visitors can watch the sound wave patterns as they play back their recording at slow, normal and fast speeds.

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Sound Sculpture	A large sculpture consisting of wind, string or percussion instruments from around the world.	Visitors can choose to hear each instrument and watch video footage of other instruments from around the world.
String Show	A model cello string that allows a standing waves to be isolated under a strobe light.	A model cello has one end of its string attached to a mechanical vibrator. By changing the frequency of the string's vibration under a strobe light, you can see standing waves in the string.
Vocal Vowels	The human throat and lips change shape when speaking or singing to create different sounds. This exhibit explores vowel sounds of 'eh, oh, ee, oo, aa'.	Placing an air hose against different shaped vases (representing the human vocal tract saying different vowel sounds), produces different vowel sounds.
Waves in a Spring	Sound waves (longitudinal) are different to light and water waves (transverse) in the way they move and transfer energy.	Turn two handles to watch two slinky springs move in a model of transverse waves (light and water) compared to longitudinal waves (sound waves).
You're the Conductor	Experiment with tempo and volume of musical pieces.	Visitors conduct a virtual orchestra using an infra red baton to control the tempo and loudness of recorded melodies.

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Quirky Fact Information Panels	
Composers	Various anecdotes and interesting facts about famous composers, such as Mozart and Beethoven.
How to Read Music	Outlines the basic components of Western musical notation, highlighting such things as time signature, length of notes, the staff, intervals, etc.
In My Day	A collection of quotes from 400 BC to the present concerning the attitudes towards emerging music genres.
Indian Classical Music	This information panel highlights the differences and similarities between Indian classical music and traditional Western music, and explains some of the components of each.
Room Acoustics	Some of the principles of architectural acoustics by using examples from the <i>Strike A Chord</i> exhibition. Specifically, it shows how the absorbing and reflecting properties of different materials and structures, affects sound transmission.
Synaesthesia	The psychological phenomenon of synaesthesia – the automatic, unlearned linking of more than one sense. For example, seeing colours associated with particular musical sounds.
The Mathematics of Music	This information panel describes how Greek mathematician and philosopher Pythagoras created a scale by studying the different notes created by a vibrating string when the string was divided into various ratios.
Throat Singing	Throat singing is a singing technique where more than one note is sung at the same time, producing a strange-sounding effect. Different traditional throat singing styles are found throughout the world.