

Music lessons improve the mind

TOPIC

The results of a study about learning music

SKILLS

Reading and speaking

READING FOCUS

Answering main idea questions and true / false / not given detail questions

SPEAKING FOCUS

Participating in small group discussions

PREPARATION

One copy of Worksheets 1, 2 and 3 for each student; one extra copy of Exercise B for each pair / small group, cut into strips

ASSUMPTIONS

Familiarity with asking for and expressing opinions

Warmer

Place ten items on your desk and give the students two minutes to memorise them. Cover them and ask the students to write down as many as they can remember. Can anyone correctly remember all ten items? What techniques did they use to help them remember?

Reading

A Write the title of the article on the board and ask the students to talk for one minute in pairs about positive effects they think music lessons can have. Elicit their suggestions and record them on the board. Hand out **Worksheet 1** and give the students one minute to read the article once, to see if the journalist mentions their ideas. What effect does the journalist mention?

Answer

It improves the memory and cognitive abilities in areas not related to music.

B Hand out **Worksheet 2** and ask the students to match the vocabulary to the definitions, using the context clues in the text to help. When they have worked out the meaning of *spatial*, ask them what they think *visio-spatial* means (as used in the text).

Answers

1 e 2 g 3 b 4 f 5 a 6 d 7 c 8 h

C Put students into pairs or small groups and tell them to turn their worksheets face down. Hand out the cut-up copies of Exercise B for playing Memory. They should shuffle the strips, place them face down and take turns to turn over two strips at a time, trying to match the word and the definition. The person with the most pairs at the end wins.

D Tell the students to read the article again and answer the questions. Ask them to check with a partner and then review their answers as a class. Alternatively, if the class enjoys competitions, make an OHT of the questions and divide the class into teams. Reveal the questions one at a time. The teams compete to answer the questions first.

Answers

- 1 true
- 2 false (*The benefits are noticeable just four months after learning to play a musical instrument.*)
- 3 not given
- 4 true
- 5 false (*children being trained by the Suzuki method ... were not selected for training according to their initial musical talent*)
- 6 not given
- 7 not given
- 8 true
- 9 true
- 10 true


Speaking

E Put the students into groups of three and hand out **Worksheet 3**. They should answer the questions individually, in note form, and then compare their answers in groups, completing the table. Review this by creating new groups in which the students use their notes to report back to their new partners, and compare their findings.

F Put the students into new groups to discuss the questions. Review their ideas as a class.

Follow up

Have a class debate on the proposition: *Art and music lessons are fun, but are not essential.*

 www.sciencedaily.com/releases/2009/03/090319132909.htm has links to articles related to music, as well as a range of scientific topics.

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A Look at the title and read the article. Does the journalist mention your ideas? If not, what effects are mentioned?

Study finds music lessons improve the mind



Young children who take music lessons develop a better memory compared with children who have no musical training, according to research published today. The benefits are noticeable just four months after learning to play a musical instrument, scientists writing in the online edition of the journal *Brain* revealed. And they suggest that music should be taught routinely in schools because of the benefits they have shown it can have on the development of the brains of young children.

Takako Fujioka, from the Baycrest Rotman Research Institute in Toronto, Canada, who was involved in the study, said: 'Our work explores how musical training affects the way in which the brain develops. It is clear that music is good for children's **cognitive** development and that music should be part of the pre-school and primary school curriculum.'

The scientists reached their conclusions after measuring brain responses to sounds in two groups of children aged between four and six. One group were taking Suzuki music lessons, while the other group had no musical training at all. Suzuki is a recognised teaching method, which can be used on children from as young as two.

The researchers wanted to find out how **auditory** responses in children matured over the period of a year; whether responses to meaningful sounds, such as musical **tone**, matured differently than responses to noises, and how musical training affected normal brain development in young children.

The team deliberately chose children being trained by the Suzuki method because it ensured they were all

trained in the same way, were not selected for training according to their initial musical talent and had similar support from their families.

The scientists discovered that general memory **capacity** improved more in the children studying music than in those not studying it. After one year the musically trained children performed better in a memory test **correlated** with general intelligence skills, such as literacy, verbal memory and mathematics.

At the same time they found there was greater improvement in tasks involving melody, **harmony** and rhythm processing in the children studying music compared to those not studying it. The first improvements came to light after just four months.

Laurel Trainor, professor of psychology, **neuroscience** and behaviour at McMaster University and director of the McMaster Institute for Music and the Mind in Ontario, who led the study, said: 'That the children studying music for a year improved in musical listening skills more than children not studying music is perhaps not very surprising. On the other hand, it is very interesting that the children taking music lessons improved more over the year on general memory skills that are correlated with non-musical abilities such as literacy, verbal memory, visio-**spatial** processing, mathematics and IQ than did the children not taking lessons. It suggests that musical training is having an effect on how the brain gets wired for general cognitive functioning related to memory and attention.'

(British English)

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B Match the words to the definitions. The words are all in the text, so use the context clues to help you.

1 cognitive	a connected
2 auditory	b the largest difference in sound between two musical notes
3 tone	c the study of the brain and nervous system
4 capacity	d a pleasant musical sound made by different notes being played together
5 correlated	e connected with thinking and conscious mental processes
6 harmony	f the total amount that can be contained or produced
7 neuroscience	g of or about hearing
8 spatial	h relating to position, area and size of things

C Test your memory of the words from Exercise B using the strips your teacher gives you.

D Read the article again and decide if the statements are true, false, or not given. If the information is true, underline where you found it in the text. If the information is false, correct it.

- 1 Studying music improves a child's capacity to remember.
- 2 After four months, there is no measurable difference between the memories of children who are studying music and those who are not.
- 3 Scientists chose children learning music through the Suzuki method because it is the best system of musical training.
- 4 The duration of the study was twelve months.
- 5 Children who study through the Suzuki method are selected according to their musical abilities.
- 6 Children who study music are better at learning languages.
- 7 Children who do not study music have difficulty learning to read and do mathematics.
- 8 Researchers found that musical training related to improved cognitive abilities in other areas.
- 9 There is a correlation between musical training and the development of the brain's ability to perform cognitive functions.
- 10 Learning music has benefits for both memory and attention in children.

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E Do you agree or disagree with these statements? Write your answer in note form in the 'Your answer' column. Then discuss the statements in groups of three and record your classmates' answers in note form.

	Your answer	Person 1	Person 2
1 I can play a musical instrument. (If yes, which instrument? Did you enjoy learning it? If no, what instrument would you like to play? Why?)			
2 I believe I have a good memory. (Why do you think this? Give an example.)			
3 I think it's important for children to study music and art. (Why?)			
4 Art and music lessons are fun, but are not essential. (Why?)			
5 I like the traditional music of my country. (What are the characteristics of this music? Why do/don't you like it?)			
6 Memorising dates and facts at school is important. (Why?)			

F Discuss these questions.

- How can people improve their memory skills?
- What are the positive effects of creative hobbies such as art and music?
- Music seems to play a role in almost every culture. Why do you think this is?
- Many cultures preserve their memories orally in the form of stories, songs and poems. Do you think this is a good way to preserve a culture's history?