

Scientists record the sounds of the Sun

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via Paul Stewart on flickr.com

What does the Sun sound like? Perhaps you have never thought about what kinds of sounds the Sun makes, but scientists have found out. Researchers from the European Space Agency, NASA and the Solar and Heliospheric Agency studied 20 years of data to listen to the Sun. They say the Sun produces a low, deep "heartbeat" sound. The scientists used a solar observatory to measure vibrations from the Sun. They translated these vibrations into different sounds. These can tell the scientists what is happening inside the Sun. They can now understand more about solar flares, chemical reactions and other phenomena that happen inside the Sun and on its surface.

The scientists explained how they created the Sun's sound. Researchers from the Stanford Experimental Physics Lab turned data from the space agencies into a "song". Dr Alex Young said: "We don't have straightforward ways to look inside the Sun. We don't have a microscope to zoom inside the Sun, so using a star or the Sun's vibrations allows us to see inside of it." Dr Young continued: "Waves are travelling and bouncing around inside the sun, and if your eyes were sensitive enough, they could actually see this." He added: "We are finally starting to understand the layers of the Sun and the complexity. That simple sound is giving us a probe inside a star. I think that's a pretty cool thing."

Sources: space.com / sci-news.com / phys.org

Writing

We need to listen to the sounds of nature more. Discuss.

Chat

Talk about these words from the article.

Sun / sound / scientists / data / listen / heartbeat / measure / vibrations / flares / experiment / straightforward / microscope / vibrations / bouncing / layers / cool

True / False

- The article said we have all wondered what the Sun sounds like. T / F
- Three space agencies joined together on this research. T / F
- The scientists said the Sun sounds like a heartbeat. T / F
- Scientists can now know more about the inside of the Sun. T / F
- The article said scientists used the Sun's sounds to make a poem. T / F
- Scientists said they have a big microscope to look at the Sun. T / F
- Scientists said many people could see waves bouncing around the Sun. T / F
- A scientist said it was cool that we could probe inside a star. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|---------------------------|---------------|
| 1. perhaps | a. discovered |
| 2. found out | b. simple |
| 3. produces | c. changed |
| 4. translated | d. quite |
| 5. happen | e. maybe |
| 6. explained | f. at last |
| 7. data | g. occur |
| 8. straightforward | h. makes |
| 9. finally | i. figures |
| 10. pretty | j. described |

Discussion – Student A

- Have you ever thought about the sounds the Sun makes?
- What other sounds are there in the universe?
- Why haven't we heard the Sun before?
- What sounds do you think there are on the Moon?
- What are your favourite sounds from nature?
- How realistic do you think the sounds are?
- Do you think the Sun would sound like a ball of fire?
- What do you know about solar flares?

Phrase Match

- | | |
|-------------------------------------|--------------------------|
| 1. you have never thought about | a. of the Sun |
| 2. a low, deep "heartbeat" | b. into different sounds |
| 3. They translated these vibrations | c. enough |
| 4. understand more about solar | d. inside the Sun |
| 5. other phenomena that happen | e. sound |
| 6. a microscope to | f. cool thing |
| 7. travelling and bouncing | g. what kinds of sounds |
| 8. sensitive | h. around |
| 9. understand the layers | i. flares |
| 10. I think that's a pretty | j. zoom inside |

Discussion – Student B

- What do you think about what you read?
- What are your favourite sounds?
- Would you like a job studying the Sun?
- What more would you like to know about the Sun?
- Would you listen to the Sun's sounds live?
- Would you like to listen to all the sounds of the universe?
- Why is the Sun so important?
- What questions would you like to ask the scientists?

Spelling

- European Space egAncy
- 20 years of adta
- a low, deep atrebhaet sound
- measure brtaviinos from the Sun
- ecimhcal reactions
- inside the Sun and on its urfscae
- how they ectared the Sun's sound
- We don't have a ocrsiocmpe
- nubconig around inside the sun
- if your eyes were nstisieve enough
- the Sun and the mpelcxotiy
- a rpboe inside a star

Answers – Synonym Match

1. e	2. a	3. h	4. c	5. g
6. j	7. i	8. b	9. f	10. d

Role Play

Role A – Piano

You think a piano is the best sound. Tell the others three reasons why. Tell them what is wrong with their sound. Also, tell the others which is the worst of these (and why): birdsong, the wind or food cooking.

Role B – Birdsong

You think birdsong is the best sound. Tell the others three reasons why. Tell them what is wrong with their sound. Also, tell the others which is the worst of these (and why): a piano, the wind or food cooking.

Role C – The Wind

You think the wind is the best sound. Tell the others three reasons why. Tell them what is wrong with their sound. Also, tell the others which is the worst of these (and why): birdsong, a piano or food cooking.

Role D – Food cooking

You think food cooking is the best sound. Tell the others three reasons why. Tell them what is wrong with their sound. Also, tell the others which is the worst of these (and why): birdsong, the wind or a piano.

Speaking – Sounds

Rank these with your partner. Put the best sounds at the top. Change partners often and share your rankings.

- | | |
|------------------------|-----------------|
| • message notification | • piano |
| • baby sounds | • birdsong |
| • home-time bell | • the wind |
| • food cooking | • running water |

Answers – True False

a	F	b	T	c	T	d	T	e	F	f	F	g	F	h	T
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Answers to Phrase Match and Spelling are in the text.