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Level 3 - 29th July, 2018

Scientists record the sounds of the Sun

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https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

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Please try Levels 0, 1 and 2 (they are easier).

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THE ARTICLE

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

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:

https://www.space.com/41285-listen-to-the-sun.html

http://www. sci-news.com/astronomy/sounds-sun-soho-06242.html

https://**phys.org**/news/2018-07-sun.html

WARM-UPS

- **1. THE SUN'S SOUNDS:** Students walk around the class and talk to other students about the Sun's sounds. Change partners often and share your findings.
- **2. CHAT:** In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

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

Have a chat about the topics you liked. Change topics and partners frequently.

- **3. NATURE'S SOUNDS:** Students A **strongly** believe nature's sounds are best; Students B **strongly** believe human-made sounds are best. Change partners again and talk about your conversations.
- **4. SOUNDS LIKE:** What sounds do you like and dislike from these places? Complete this table with your partner(s). Change partners often and share what you wrote.

	Like	Dislike
The city		
The beach		
Forests		
Your home		
Shopping malls		
Mountains		

- **5. SCIENTISTS:** Spend one minute writing down all of the different words you associate with the word "scientists". Share your words with your partner(s) and talk about them. Together, put the words into different categories.
- **6. SOUNDS:** Rank these with your partner. Put the best sounds at the top. Change partners often and share your rankings.
 - piano
 - birdsong
 - the wind
 - running water

- message notification
- baby sounds
- · home-time bell
- food cooking

VOCABULARY MATCHING

Paragraph 1

- 1. scientists

 a. A room or building that has a big telescope or other scientific equipment to study the stars, sky and planets.
- 2. data b. Makes or creates.
- 3. produces c. Facts, information and statistics collected together to check and use.
- 4. solar d. Facts or situations that we are not sure why they happen.
- 5. observatory e. People who is study or have expert knowledge of one or more of the natural or physical sciences.
- 6. vibrations f. Anything about the Sun.
- 7. phenomena g. Very, very quick movements backwards and forwards and from side to side.

Paragraph 2

- 8. agencies h. Uncomplicated and easy to do or understand.
- 9. straightforward i. Easily damaged, injured, or distressed by slight changes.
- 10. microscope j. A small machine used for measuring, testing, or getting information.
- 11. bouncing k. A machine used for looking at very small things by zooming in on them.
- 12. sensitive l. How difficult something is.
- 13. complexity m. Moving quickly up, back, or away from a surface after hitting it.
- 14. probe n. Departments or bodies that give a service for a government or similar organization.

BEFORE READING / LISTENING

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

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

2. SYNONYM MATCH: (The words in **bold** are from the news article.)

- 1. perhaps
- 2. found out
- 3. produces
- 4. translated
- 5. happen
- 6. explained
- 7. data
- 8. straightforward
- 9. finally
- 10. pretty

- a. discovered
- b. simple
- c. changed
- d. quite
- e. maybe
- f. at last
- g. occur
- h. makes
- i. figures
- i. described

3. PHRASE MATCH: (Sometimes more than one choice is possible.)

- 1. you have never thought about
- 2. a low, deep "heartbeat"
- 3. They translated these vibrations
- 4. understand more about solar
- 5. other phenomena that happen
- 6. a microscope to
- 7. travelling and bouncing
- 8. sensitive
- 9. understand the layers
- 10. I think that's a pretty

- a. of the Sun
- b. into different sounds
- c. enough
- d. inside the Sun
- e. sound
- f. cool thing
- g. what kinds of sounds
- h. around
- i. flares
- i. zoom inside

GAP FILL

What does the Sun sound like? Perhaps you have	makes
(1) thought about what kinds of sounds the Sun	happening
(2), but scientists have found out. Researchers	deep
from the European Space Agency, NASA and the Solar and Heliospheric Agency studied 20 years of (3) to	surface
listen to the Sun. They say the Sun produces a low,	never
(4) "heartbeat" sound. The scientists used a solar	chemical
observatory to (5) vibrations from the Sun. They	data
translated these vibrations into different sounds. These can tell the scientists what is (6) inside the Sun. They can now understand more about solar flares, (7) reactions and other phenomena that happen inside the Sun and on its (8)	measure
The scientists explained how they (9) the Sun's	agencies
sound. Researchers from the Stanford Experimental Physics Lab	finally
turned data from the space (10) into a "song". Dr Alex Young said: "We don't have straightforward	created
(11) to look inside the Sun. We don't have a	thing
microscope to zoom inside the Sun, so using a star or the Sun's	allows
vibrations (12) us to see inside of it." Dr Young	simple
continued: "Waves are travelling and (13) around	ways
inside the Sun, and if your eyes were sensitive enough, they could	,
actually see this." He added: "We are (14) starting	bouncing
to understand the layers of the Sun and the complexity. That	
(15) sound is giving us a probe inside a star. I think	
that's a pretty cool (16)"	

LISTENING — Guess the answers. Listen to check.

1)	Perhaps you have never thought about what kinds of sounds a. a Sun makes
	b. a Sun matesc. the Sun bakes
21	d. the Sun makes
2)	They say the Sun produces a low, sound a. deep "heartbeat"
	b. deep "beetroot"
	c. deep "hart beast" d. deep "hearth beast"
3)	The scientists used a solar observatory to measure the Sun
	a. vibrating fromb. vibe rations from
	c. vie rations from
	d. vibrations from
4)	They can now understand more about solar flares, a. chemicals reactions
	b. chemically reactions
	c. chemical reactions
E.)	d. chemical reaction other phenomena that happen inside the Sun and
٥)	a. on that's surface
	b. on its surface
	c. on nits surface d. on knits surface
6)	the Stanford Experimental Physics Lab turned data from the space agencies
	a. into a "song"
	b. in to a "song"c. in tour "song"
	d. inter a "song"
7)	We don't have a microscope to zoom
	a. insides the Sunb. ins Ides the Sun
	c. downside the Sun
٥,	d. inside the Sun
8)	bouncing around inside the Sun, and if your eyes were a. sent a tiff enough
	b. sense a tiff enough
	c. sensitive enoughd. senses tiff enough
9)	We are finally starting to understand the layers of the Sun and
-,	a. the complex city
	b. the con breaks a teec. the complex a tea
	d. the complexity
10) That simple sound is giving us a probe inside a star. I think that's a
	a. prettily cool thingb. prettyish cool thing
	c. prettiest cool thing
	d. pretty cool thing

LISTENING – Listen and fill in the gaps

What does the Sun sound like? Perhaps (1) 1	hought
about what (2) the Sun makes, but scientist	ts have
found out. Researchers from the European Space Agency, NASA a	and the
Solar and Heliospheric Agency studied 20 (3)	to
listen to the Sun. They say the Sun produces a low, deep "heartbeat"	sound.
The scientists used a solar observatory (4) fr	om the
Sun. They translated these vibrations into different sounds. These	can tell
the scientists (5) inside the Sun. They ca	an now
understand more about solar flares, chemical reactions and	other
phenomena (6) the Sun and on its surface.	
The scientists explained (7) the Sun's	sound.
Researchers from the Stanford Experimental Physics	Lab
(8) the space agencies into a "song". Dr Alex	Young
said: "We don't have straightforward ways to look inside the Sun. W	'e don't
have a microscope to (9) Sun, so using a star	r 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
(10) were sensitive enough, they could actual	ally see
this." He added: "We (11) to understand the	layers
of the Sun and the complexity. That simple sound is giving us a probe	e inside
a star. I think that's a (12)	

COMPREHENSION QUESTIONS

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

1.	What did the article say people might wonder about?
2.	How many space agencies studied data about the Sun?
3.	What did the scientists say the Sun sounds like?
4.	What did the scientists measure and translate?
5.	What kind of reactions did the article say scientists could understand?
6.	What did Stanford scientists turn data into?
7.	What did a scientist say he didn't have in order to look at the Sun?
8.	What are travelling and bouncing around the Sun?
9.	What did a scientist say we are finally beginning to understand?
10.	What did a scientist say we are probing into?

MULTIPLE CHOICE - QUIZ

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

- 1) What did the article say people might wonder about?
- a) the Sun's heat
- b) when the Sun will disappear
- c) the real colour of the Sun
- d) how the Sun sounds
- 2) How many space agencies studied data about the Sun?
- a) 2
- b) 3
- c) 4
- d) 5
- 3) What did the scientists say the Sun sounds like?
- a) a lion roaring
- b) a forest fire
- c) a steel furnace
- d) a heartbeat
- 4) What did the scientists measure and translate?
- a) the diameter of the Sun
- b) solar flares
- c) vibrations
- d) rays
- 5) What kind of reactions did the article say scientists could understand?
- a) hot ones
- b) solar reactions
- c) personal reactions
- d) chemical reactions

- 6) What did Stanford scientists turn data into?
- a) a poem
- b) a flare
- c) a song
- d) a wave
- 7) What did a scientist say he didn't have in order to look at the Sun?
- a) a microscope
- b) the Internet
- c) a magnifying glass
- d) glasses
- 8) What are travelling and bouncing around the Sun?
- a) satellites
- b) asteroids
- c) waves
- d) chemicals
- 9) What did a scientist say we are finally beginning to understand?
- a) space
- b) the Sun's layers
- c) time
- d) space travel
- 10) What did a scientist say we are probing into?
- a) a star
- b) black holes
- c) space travel
- d) the future

ROLE PLAY

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

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.

AFTER READING / LISTENING

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

1. WORD SEARCH: Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words 'sun' and 'sounds'.

sun	sounds

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.
- **2. ARTICLE QUESTIONS:** Look back at the article and write down some questions you would like to ask the class about the text.
 - Share your questions with other classmates / groups.
 - Ask your partner / group your questions.
- **3. GAP FILL:** In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?
- **4. VOCABULARY:** Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.
- **5. TEST EACH OTHER:** Look at the words below. With your partner, try to recall how they were used in the text:

• perhaps	created
• found	• turned
• 20	• zoom
• low	• allows
• these	finally
 happen 	• pretty

THE SUN'S SOUNDS SURVEY

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

Write five GOOD questions about the Sun's sounds in the table. Do this in pairs. Each student must write the questions on his / her own paper. When you have finished, interview other students. Write down their answers.

	STUDENT 1	STUDENT 2	STUDENT 3
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

THE SUN'S SOUNDS DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

- 1. What did you think when you read the headline?
- 2. What images are in your mind when you hear the word 'sun'?
- 3. Have you ever thought about the sounds the Sun makes?
- 4. What other sounds are there in the universe?
- 5. Why haven't we heard the Sun before?
- 6. What sounds do you think there are on the Moon?
- 7. What are your favourite sounds from nature?
- 8. How realistic do you think the sounds are?
- 9. Do you think the Sun would sound like a ball of fire?
- 10. What do you know about solar flares?

Scientists record the sounds of the Sun – 29th July, 2018 Thousands more free lessons at breakingnewsenglish.com

THE SUN'S SOUNDS DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

- 11. Did you like reading this article? Why/not?
- 12. What do you think of when you hear the word 'sounds'?
- 13. What do you think about what you read?
- 14. What are your favourite sounds?
- 15. Would you like a job studying the Sun?
- 16. What more would you like to know about the Sun?
- 17. Would you listen to the Sun's sounds live?
- 18. Would you like to listen to all the sounds of the universe?
- 19. Why is the Sun so important?
- 20. What questions would you like to ask the scientists?

DISCUSSION (Write your own questions)

STUDENT A's QUESTIONS (Do not show these to student B)

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ISCUS	SION (Write your own questions)
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ISCUS	SION (Write your own questions)

LANGUAGE - CLOZE

of so Euro year "hea from the s	ounds pean s of rtbea the s scient	the Sun sound the Sun makes Space Agency data to listen t" sound. The Sun. They transists what is (5), chemical surface.	s, but , NASA to th scient slated i	scientists have and the Some Sun. The distinction is these vibrations in the Sun and the S	ve four lar and y say solar done into the solar done into the solar done into the solar done in the so	nd (2) R d Heliospheric the Sun (3) observatory t o different so	eseard Agen o mea	chers from the cy studied 20 a low, deep can teled more about
		tists explained		•				
		Experimental P	•			-		
	_	r Alex Young s			•			
		We don't have a rations (9)		•		· ·		
		and (10)				_		
enou	ıgh, t	hey could actu	ually s	ee this." He	adde	d: "We are (11)	starting to
unde	erstan	d the layers of	f the S	Sun and the	comple	xity. That sir	nple s	ound is giving
us a	probe	e inside a star.	I think	that's a pret	ty (12)	thing."		
Put	the c	orrect words	from	the table be	low in	the above a	article	
1.	(a)	event	(b)	ever	(c)	even	(d)	never
2.	(a)	on	(b)	in	(c)	up	(d)	out
3.	(a)	producer	(b)	produces	(c)	production	(d)	produce
4.	(a)	extremities	(b)	collections	(c)	vibrations	(d)	additions
5.	(a)	happening	(b)	happens	(c)	happened	(d)	happen
6.	(a)	flares	(b)	fares	(c)	flaws	(d)	flairs
7.	(a)	timed	(b)	churned	(c)	framed	(d)	turned
8.	(a)	ways	(b)	routes	(c)	arcs	(d)	logs
9.	(a)	flows	(b)	allows	(c)	flowers	(d)	follows
10.	(a)	bounce	(b)	bounced	(c)	bouncing	(d)	bouncer
11.	(a)	lastly	(b)	conclusion	(c)	finally	(d)	conclude
12.	(a)	prettily	(b)	pretty	(c)	petty	(d)	petting

SPELLING

Paragraph 1

- 1. European Space egAncy
- 2. 20 years of adta
- 3. a low, deep <u>atrebhaet</u> sound
- 4. measure brtaviinos from the Sun
- 5. ecimhcal reactions
- 6. inside the Sun and on its urfscae

Paragraph 2

- 7. how they <u>ectared</u> the Sun's sound
- 8. We don't have a <u>ocrsiocmpe</u>
- 9. <u>nubconig</u> around inside the sun
- 10. if your eyes were <u>nstisieve</u> enough
- 11. the Sun and the mpelcxotiy
- 12. a <u>rpboe</u> inside a star

PUT THE TEXT BACK TOGETHER

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

Number these lines in the correct order.

()	Agency studied 20 years of data to listen to the Sun. They say the Sun produces a low, deep "heartbeat"
()	makes, but scientists have found out. Researchers from the European Space Agency, NASA and the Solar and Heliospheric
()	inside the Sun. They can now understand more about solar flares, chemical
()	the Sun's vibrations allows us to see inside of it." Dr Young continued: "Waves are travelling and
()	The scientists explained how they created the Sun's sound. Researchers from the Stanford Experimental Physics Lab turned
()	reactions and other phenomena that happen inside the Sun and on its surface.
()	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
()	complexity. That simple sound is giving us a probe inside a star. I think that's a pretty cool thing."
()	ways to look inside the Sun. We don't have a microscope to zoom inside the Sun, so using a star or
(1)	What does the Sun sound like? Perhaps you have never thought about what kinds of sounds the Sun
()	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
()	data from the space agencies into a "song". Dr Alex Young said: "We don't have straightforward

PUT THE WORDS IN THE RIGHT ORDER

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

- 1. the makes . kinds sounds Sun of What
- 2. these vibrations into different sounds . They translated
- 3. happening . the scientists can is what tell These
- 4. can about solar now They understand flares . more
- 5. phenomena the happen that Sun . inside Other
- 6. Scientists sound . explained created the Sun's they how
- 7. look have don't to ways straightforward We inside .
- 8. sun . and bouncing around Travelling the inside
- 9. starting layers . We finally understand to the are
- 10. us simple That is a probe . sound giving

CIRCLE THE CORRECT WORD (20 PAIRS)

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

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

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

Talk about the connection between each pair of words in italics, and why the correct word is correct.

INSERT THE VOWELS (a, e, i, o, u)

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

W h_t d__ s t h_ S_n s__ n d l_k_? P_r h_p s y__ h_v_ n_v_r th__ ght _b__ t wh_t k_n ds _f s__ n $ds \quad t \quad h_ \quad S_n \quad m_k_s \; , \quad b_t \quad s \quad c__ \quad n \quad t_s \quad t \quad s \quad h_v_ \quad f__ \quad n$ d __ t. R_s__ rch_rs fr_m th_ E_r_p__ n Sp_c_ Agncy, NASA _nd th_ S_I_r _nd H_I__ sp h_r_c A $g_n c y$ s t_d_d d 20 y_r rs $_f$ d_t t_d $l_s t_n t_t + s_n$. They say the San prades _ l_w , d__ p "h__ rtb__ t" s__ nd. Th_ sc__ n $t_s t s _s_d _s_l_r _b s_r v_t_r y t_m_s_r_ v_b$ r_t_ ns fr_m th_ S_n. Th_y tr_nsl_t_d th_s_ $v_b r_t = n s n t d_f f_r n t s_n d s$. Thus c_n t_ll th_ sc__ nt_sts wh_t _s h_pp_n_ng _ns_d_ $t \ h_ \ S_n \ . \quad T \ h_y \ c_n \ n_w \ _n \ d_r \ s \ t_n \ d \ m_r_ \ _b__ \ t$ s_l_r fl_r_s, ch_m_c_l r__ ct__ ns _nd _th_r p $h_n_m_n$ th_t h_p_n _n s_d_ th_ S_n _n d _n _ts s_r f_c_.

th_ S_n 's s_n nd. R_s_r rch_rs fr_m th_ S_r t_n f_r d E x p_r_m_n t_l P h y s_c s L_b t_r n_d $d_t_ \ f \ r_m \quad t \ h_ \ s \ p_c_ \ _g_n \ c__ \ s \ _n \ t__ \ " \ s_n \ g " \ . \quad D$ r A l_x Y__ n g s__ d: "W_ d_n't h_v_ str__ g h ' t $h_v_m = m_c r_s c_p_t t_z_m = m_n s_d_t h_s_n$, s_ s_n g _ s t_r _r t h_ S_n 's v_b r_t_ n s _ l l_w s _s t_ s__ _n s_d_ _f _t . " Dr Y__ n g c_n t_n__ d: "W_v_s _r_ tr_v_ll_n g _n d b__ n c_n g _r__ n d $_n \ s_d_ \ t \ h_ \ s_n \ , \ _n \ d \ _f \ y__ \ r \ _y_s \ w_r_ \ s_n$ $s_t_v_n_g h$, th_y c_ld ct_lly s_l th_s . " H__d d_d: "W__r_ f_n_lly st_rt_ng t__nd_r st_nd $th_l_y_rs_f$ $th_l_S_n$ $_nd$ $th_l_c_mp$ $l_x_t \ y \ . \quad T \ h_t \quad s_m \ p \ l_ \ s__ \ n \ d \ _s \quad g_v_n \ g \quad _s \quad _ \ p$ r_b_ n s_d_ s t_r. I th_nk th_t's _ pr_tty c__ l th_n g . "

PUNCTUATE THE TEXT AND ADD CAPITALS

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

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 suns sound researchers from

the stanford experimental physics lab turned data from the space agencies

into a song dr alex young said we dont have straightforward ways to look

inside the sun we dont have a microscope to zoom inside the sun so using a

star or the suns 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 thats a pretty cool thing"

Level 3 Scientists record the sounds of the Sun – 29th July, 2018

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PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html

WhatdoestheSunsoundlike?Perhapsyouhaveneverthoughtaboutwh atkindsofsoundstheSunmakes,butscientistshavefoundout.Researc hersfromtheEuropeanSpaceAgency,NASAandtheSolarandHeliosph ericAgencystudied20yearsofdatatolistentotheSun.TheysaytheSunp roducesalow,deep"heartbeat"sound.Thescientistsusedasolarobser vatorytomeasurevibrationsfromtheSun.Theytranslatedthesevibrati onsintodifferentsounds. These cantell the scientists what is happening in nsidetheSun.Theycannowunderstandmoreaboutsolarflares,chemic alreactions and other phenomenath at happenins idethe Sun and on its s urface. The scientists explained how they created the Sun's sound. Rese archersfromtheStanfordExperimentalPhysicsLabturneddatafromthespaceagenciesintoa"song".DrAlexYoungsaid:"Wedon'thavestraigh tforwardwaystolookinsidetheSun.Wedon'thaveamicroscopetozoom insidetheSun, sousing a star or the Sun's vibrations allow susto see insid eofit."DrYoungcontinued:"Wavesaretravellingandbouncingaroundi nsidetheSun, and if your eyes were sensitive enough, they could actually seethis."Headded:"Wearefinallystartingtounderstandthelayersofth eSunandthecomplexity. That simples ound is giving us a probe in side as t ar. Ithinkthat's a pretty coolthing."

FREE WRITING

 $\textbf{From} \quad \underline{\text{https://breakingnewsenglish.com/1807/180729-sounds-of-the-sun.html}}$

Write about the	Sun's sounds for	10 minutes.	Comment on your	partner's paper.

ACADEMIC WRITING

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

HOMEWORK

- **1. VOCABULARY EXTENSION:** Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.
- **2. INTERNET:** Search the Internet and find out more about this news story. Share what you discover with your partner(s) in the next lesson.
- **3. THE SUN'S SOUNDS:** Make a poster about the Sun's sounds. Show your work to your classmates in the next lesson. Did you all have similar things?
- **4. NATURE SOUNDS:** Write a magazine article about studying the sounds of nature. Include imaginary interviews with people who are for and against this.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

- **5. WHAT HAPPENED NEXT?** Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.
- **6. LETTER:** Write a letter to an expert on the Sun's sounds. Ask him/her three questions about them. Give him/her three of your opinions on the Sun's sounds. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

1. e 2. С 3. h 4. f 5. а 6. q 7. d 9. 8. n h 10. k 11. m 12. i 13. 1 14. j

TRUE / FALSE (p.5)

a F b T c T d T e F f F g F h T

SYNONYM MATCH (p.5)

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

COMPREHENSION QUESTIONS (p.9)

pretty

10.

WORDS IN THE RIGHT ORDER (p.20)

į.

quite

1. What the Sun sounds like? 1. What kinds of sounds the Sun makes. 2. 2. They translated these vibrations into different Three sounds. 3. 3. A heartbeat These can tell the scientists what is happening. 4. 4. **Vibrations** They can now understand more about solar flares. 5. 5. Chemical reactions Other phenomena that happen inside the Sun. 6. A song 6. Scientists explained how they created the Sun's sound. 7. 7. A microscope We don't have straightforward ways to look inside. 8. Waves 8. Travelling and bouncing around inside the Sun. 9. 9. The Sun's layers We are finally starting to understand the layers. 10. 10. A star That simple sound is giving us a probe.

MULTIPLE CHOICE - QUIZ (p.10)

1. d 2. b 3. d 4. c 5. d 6. c 7. a 8. c 9. b 10. a

ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2. (It's good for your English ;-)