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Level 3 – 26th December 2024 NASA spacecraft flies closest ever to the Sun

FREE online quizzes, mp3 listening and more for this lesson here: https://breakingnewsenglish.com/2412/241226-parker-solar-probe.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/2412/241226-parker-solar-probe.html

Things are heating up for the USA's National Aeronautical Space Administration (NASA). One of the agency's missions is to study the Sun. In 2018, NASA sent a small research probe to photograph our nearest star. The spacecraft is called the Parker Solar Probe. It made history on Christmas Eve by going closer to the Sun than any spacecraft has ever gone before. Parker flew to within 6.1 million kilometers of the Sun. This is very close. Parker also holds another record. It is the fastest object ever built by humans. In September 2023, it flew at a speed of 635,266 kph. At this speed, the probe could travel the 10,846 km from New York to Tokyo in just 1.025 minutes.

The Parker Solar Probe is named after the astrophysicist Dr Eugene Parker. He spent most of his life studying the Sun and its solar flares. He wanted to know why the flares, which shoot off from the Sun's surface, are hotter than the surface. This is known as the "coronal heating problem". It is a long-standing mystery for scientists. The temperature at the Sun's surface is around 4,100°C; while the temperature of the corona's flares can reach 1.1 million degrees Celsius. Scientists also hope to find out how solar winds originate. NASA said Parker (the probe) has faced extreme heat on its record-breaking fly-by. Temperatures reached a scorching 980 degrees Celsius.

Sources: https://www.**space.com**/nasa-parker-solar-probe-christmas-flyby https://edition.**cnn.com**/2024/12/23/science/parker-solar-probe-sun-close-approach/index.html https://**phys.org**/news/2024-12-nasa-probe-closest-sun.html

WARM-UPS

1. THE SUN: Students walk around the class and talk to other students about the Sun. 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?

heating / NASA / space / the Sun / probe / photograph / Christmas Eve / travel / astrophysicist / solar flares / scientists / mystery / solar winds / record breaking

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

3. RESEARCH: Students A **strongly** believe we should spend more money on researching the Sun; Students B **strongly** believe the opposite. Change partners again and talk about your conversations.

4. THE UNIVERSE: What do you know about these things? What do you want to know? Complete this table with your partner(s). Change partners often and share what you wrote.

	What I Know	What I Want to Know
The Sun		
The Moon		
The Milky Way		
The Aurora Borealis		
Comets		
Asteroids		

5. MISSION: Spend one minute writing down all of the different words you associate with the word "mission". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

6. STUDYING: Rank these with your partner. Put the best things to study at the top. Change partners often and share your rankings.

- The Sun
- Space
- The oceans
- The climate

- The Moon
- Asteroids
- Mars
- The poles

VOCABULARY MATCHING

Paragraph 1

1.	heating up	a.	Inside something or a part of something.
2.	mission	b.	Getting warmer or hotter.
3.	probe	c.	A small machine sent to study something, like space or planets.
4.	within	d.	The best performance or most amazing event of its kind.
5.	record	e.	The past of "fly," meaning to move through the air.
6.	object	f.	A special job or task to do.
7.	flew	g.	A thing that you can see and touch.

Paragraph 2

8.	solar	h.	Something we don't know or understand yet.
9.	flares	i.	Very, very hot.
10.	surface	j.	To start or come from a place.
11.	mystery	k.	The outside part of something.
12.	temperature	I.	How hot or cold something is.
13.	originate	m.	About the sun.
14.	scorching	n.	Bright flashes of light or heat.

BEFORE READING / LISTENING

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

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

- 1. NASA means North Atlantic Space Agency. **T / F**
- 2. The NASA Parker Solar Probe spacecraft started its journey in 2018. T / F
- 3. The Parker Solar Probe is the fastest thing ever made by humans. **T / F**
- 4. The probe could get from New York to Tokyo in less than a minute. **T / F**
- 5. The probe is named after a quantum physicist. **T / F**
- 6. Solar flares are hotter than the surface of the Sun. **T / F**
- 7. A solar flare can be over a million degrees Celsius. T / F
- 8. The Parker Solar Probe faced temperatures of over 1,000°C. T / F

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

- 1. heating
- 2. nearest
- 3. object
- 4. built
- 5. travel
- 6. studying
- 7. surface
- 8. reach
- 9. hope
- 10. scorching

- a. thing
- b. top side
- c. move
- d. researching
- e. want
- f. closest
- g. red-hot
- h. warming
- i. get to
- j. created

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

- 1. One of the agency's missions
- 2. photograph our
- 3. It made
- 4. Parker also holds
- 5. it flew at a speed
- 6. He spent most of his
- 7. It is a long-standing mystery
- 8. the temperature
- 9. find out how solar
- 10. Temperatures reached a scorching

- a. life studying the Sun
- b. is to study the Sun
- c. 980 degrees Celsius
- d. of 635,266 kph
- e. history
- f. of the corona's flares
- g. winds originate
- h. nearest star
- i. another record
- j. for scientists

GAP FILL

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Things are (1)	_ up for the USA's National nearest
Aeronautical Space Administration (ASA). One of the agency's record
(2) is to stu	ly the Sun. In 2018, NASA <i>heating</i>
sent a small research pro	e to photograph our
(3) star. T	e spacecraft is called the flew
Parker Solar Probe. It made history	on Christmas Eve by going missions
closer to the Sun than any space	aft has ever gone before.
Parker (4) to	within 6.1 million kilometers
of the Sun. This is very close.	
(5)	t is the fastest object
(6) ever bui	by humans. In September
2023, it (7)	a speed of 635,266 kph. At
this speed, the probe could travel the	e 10,846 km from New York
to Tokyo in (8)	1.025 minutes.

The Parker Solar Probe is named after the astrophysicist Dr hope Eugene Parker. He (9) _____ most of his life spent studying the Sun and its solar flares. He wanted to know why the scorching (10) _____, which shoot off from the Sun's surface surface, are hotter than the (11) _____. This is known as the "coronal heating problem". It is a long-standing originate (12) _____ for scientists. The temperature at the temperature surface is around 4,100°C; while Sun's the flares (13) ______ of the corona's flares can reach 1.1 mystery million degrees Celsius. Scientists also (14) to find out how solar winds (15) ______. NASA said Parker (the probe) has faced extreme heat on its recordbreaking fly-by. Temperatures reached а (16) _____ 980 degrees Celsius.

LISTENING – Guess the answers. Listen to check.

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

	m <u>meps.//breakinghewsenglish.com/2412/241220 parker solar probe.nem</u>
1)	Things are heating up for the USA's National Aeronautical a. Spade Administration b. Space Administrator c. Space Administration d. Space Admonition
2)	 going closer to the Sun than any spacecraft has a. ever gone after b. ever gone before c. ever going before d. never gone before
3)	 This is very close. Parker also a. holds another records b. folds another record c. holds other record d. holds another record
4)	 It is the fastest object ever a. build by humans b. built by humans c. built bye humans d. built buy humans
5)	 travel the 10,846 km from New York to Tokyo in a. adjust 1.025 minutes b. just 1.025 minutes c. justice 1.025 minutes d. justly 1.025 minutes
6)	 He spent most of his life studying the Sun and a. its solar flares b. its solar flared c. it's solar flares d. its lunar flares
	He wanted to know why the flares, which shoot off from a. the Sun's surfeits b. the Sun's surface c. the Sun's surf ace d. the Sun's surfaced
-	 It is a long-standing a. mysterious for scientists b. mystery for scientist c. mystery from scientists d. mystery for scientists
	 Scientists also hope to find out how a. solar winds original b. solar winds originate c. solar winds originates d. solar winds origin ate
1(NASA said Parker (the probe) has faced extreme heat on its record a. break in fly-bye b. break king fly-by c. breaking fly-by

c. breaking fly-byd. breaking fly-bye

LISTENING – Listen and fill in the gaps

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

are (1) _____ the USA's Things National Aeronautical Space Administration (NASA). One of the agency's missions is Sun. In 2018, NASA to studv the sent а small (2) _____ photograph our nearest star. The spacecraft is called the Parker Solar Probe. It made history on Christmas Eve by (3) ______ the Sun than any spacecraft has ever gone before. Parker (4) ______ 6.1 million kilometers of the Sun. This is very close. Parker also (5) ______. It is the fastest object ever built by humans. In September 2023, it flew at (6) _____ 635,266 kph. At this speed, the probe could travel the 10,846 km from New York to Tokyo in just 1.025 minutes. The Parker Solar Probe (7) ______ the astrophysicist Dr Eugene Parker. He spent most of his life studying the Sun and its solar flares. He wanted to know whv the flares, which (8) ______ the Sun's surface, are hotter than the surface. This is known as the "coronal heating problem". It is a (9) _____ for scientists. The temperature at the Sun's surface is around 4,100°C; while the temperature of the corona's flares can reach 1.1 million degrees Celsius. Scientists also hope to find out how (10) ______. NASA said Parker (the probe) has (11) _____ on its record-breaking fly-by. Temperatures (12) _____ 980 degrees Celsius.

COMPREHENSION QUESTIONS

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

- 1. What does "NASA" mean?
- 2. When did the Parker Solar Probe start its journey?
- 3. When did the Parker Solar Probe get its closest to the Sun?
- 4. What other record does the Parker Solar Probe hold?
- 5. How long would it take the probe to get from New York to Tokyo?
- 6. What did the astrophysicist Dr Eugene Parker spend his life studying?
- 7. What is hotter than the Sun's surface?
- 8. How hot is the Sun's surface?
- 9. What do scientists want to find the origins of?
- 10. What is the hottest temperature the Parker Solar Probe faced?

MULTIPLE CHOICE - QUIZ

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

1) What does "NASA" mean? 6) What did the astrophysicist Dr Eugene Parker spend his life a) North Atlantic Space Administration studying? b) North Atlantic Space Agency a) spacecraft c) National Aero Space b) the Moon Administration c) the Sun d) National Aeronautical Space d) heat Administration 7) What is hotter than the Sun's 2) When did the Parker Solar Probe surface? start its journey? a) corona flares a) 2017 b) the centre of the Sun b) 2018 c) nothing c) 2019 d) nuclear fusion d) 2020 8) How hot is the Sun's surface? 3) When did the Parker Solar Probe a) just under 4,100°C get its closest to the Sun? b) just over 4,100°C a) December 23 c) around 4,100°C b) Boxing Day d) exactly 4,100°C c) Christmas Day d) Christmas Eve 9) What do scientists want to find the 4) What other record does the origins of? Parker Solar Probe hold? a) time a) the Most expensive spacecraft b) solar winds b) The fastest spacecraft to reach c) the meaning of life d) the Sun space c) The fastest object ever made. 10) What is the hottest temperature d) The most technologically the Parker Solar Probe faced? advanced spacecraft a) 980 degrees Celsius 5) How long would it take the probe b) 890 degrees Celsius to get from New York to Tokyo?

- c) 980 degrees Fahrenheit
- d) 890 degrees Fahrenheit
- Level 3NASA spacecraft flies closest ever to the Sun 26th December 2024More free lessons atbreakingnewsenglish.com- Copyright Sean Banville 2024

a) around one minute

b) exactly one minutec) just under one minuted) just over one minute

ROLE PLAY

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Role A – The Sun

You think the Sun is the best thing to study. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least interesting of these (and why): the oceans, Mars or the climate.

Role B – The Oceans

You think the oceans are the best thing to study. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least interesting of these (and why): the Sun, Mars or the climate.

Role C – Mars

You think Mars is the best thing to study. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least interesting of these (and why): the oceans, the Sun or the climate.

Role D – The Climate

You think the climate is the best thing to study. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least interesting of these (and why): the oceans, Mars or the Sun.

AFTER READING / LISTENING

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

1. WORD SEARCH: Look online / in your dictionary to find collocates, information on, synonyms for... the words 'sun' and 'spacecraft'.

sun	spacecraft

- 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:

THE SUN SURVEY

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Write five GOOD questions about the Sun 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 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 'spacecraft'?
- 3. What do you know about NASA?
- 4. What do you know about the Sun?
- 5. What do you want to know about the Sun?
- 6. What do you think of the NASA mission to study the Sun?
- 7. Are you more interested in the Sun or the Moon?
- 8. Do you think Santa saw the probe on Christmas Eve?
- 9. Would you like to travel from New York to Tokyo in one minute?
- 10. Would you like to travel in space?

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THE SUN 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 'sun'?
- 13. What do you think about what you read?
- 14. Would you like to be an astrophysicist?
- 15. What do you know about the Sun's heat?
- 16. What do you know about solar winds?
- 17. How important is the Sun?
- 18. What do you think of a temperature of 1.1 million degrees?
- 19. Are solar or lunar eclipses better?
- 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)

1.	 		
2.		 	
3.	 	 	
4.	 	 	
5.	 	 	
6.	 	 	

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DISCUSSION (Write your own questions)

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

1.	
2.	
3.	
4.	
5.	
6.	

LANGUAGE - CLOZE

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Things are heating (1) _____ for the USA's National Aeronautical Space Administration (NASA). One of the agency's (2) _____ is to study the Sun. In 2018, NASA sent a small research probe to photograph our nearest (3) _____. The spacecraft is called the Parker Solar Probe. It (4) _____ history on Christmas Eve by going closer to the Sun than any spacecraft has ever gone before. Parker flew to within 6.1 million kilometers of the Sun. This is very close. Parker also (5) _____ another record. It is the fastest object ever built by humans. In September 2023, it flew at a speed of 635,266 kph. At this speed, the probe could travel the 10,846 km from New York to Tokyo in (6) _____ 1.025 minutes.

The Parker Solar Probe is named (7) _____ the astrophysicist Dr Eugene Parker. He spent most of his life studying the Sun and its solar flares. He wanted to know why the flares, which shoot (8) _____ from the Sun's surface, are hotter than the surface. This is known as the "coronal heating problem". It is a long-(9) _____ mystery for scientists. The temperature at the Sun's surface is around 4,100°C; while the temperature of the corona's flares can reach 1.1 million degrees Celsius. Scientists also hope to find out how (10) _____ winds originate. NASA said Parker (the probe) has faced (11) _____ heat on its record-breaking fly-by. Temperatures reached a (12) _____ 980 degrees Celsius.

Put the correct words from the table below in the above article.

1.	(a)	in	(b)	on	(c)	up	(d)	down
2.	(a)	missions	(b)	misses	(c)	missiles	(d)	missing
3.	(a)	galaxy	(b)	star	(c)	orb	(d)	asteroid
4.	(a)	flew	(b)	gave	(c)	took	(d)	made
5.	(a)	hands	(b)	grasps	(c)	holds	(d)	touches
6.	(a)	adjust	(b)	just	(c)	justly	(d)	justice
7.	(a)	after	(b)	along	(c)	post	(d)	before
8.	(a)	by	(b)	from	(c)	on	(d)	off
9.	(a)	crouching	(b)	kneeling	(c)	standing	(d)	leaning
10.	(a)	floral	(b)	tidal	(c)	lunar	(d)	solar
11.	(a)	extremely	(b)	extreme	(c)	extremity	(d)	extremes
12.	(a)	scorching	(b)	freezing	(c)	chilly	(d)	roasted

SPELLING

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Paragraph 1

- 1. Things are <u>engathi</u> up
- 2. One of the agency's <u>nmosiiss</u>
- 3. NASA sent a small research borpe
- 4. It made osiyhrt on Christmas Eve
- 5. the fastest jbcteo ever built
- 6. it flew at a <u>esepd</u> of 635,266 kph

Paragraph 2

- 7. the Sun and its <u>oslra</u> flares
- 8. It is a long-standing meyrtys for scientists
- 9. the tptemaeerru of the corona's flares
- 10. how solar winds irigaonet
- 11. the probe has faced emxeetr heat
- 12. a sgoriccnh 980 degrees Celsius

PUT THE TEXT BACK TOGETHER

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Number these lines in the correct order.

- () surface, are hotter than the surface. This is known as the "coronal heating problem". It is a long-standing
- () by humans. In September 2023, it flew at a speed of 635,266 kph. At this speed, the probe could travel
- () is to study the Sun. In 2018, NASA sent a small research probe to photograph our nearest
- () winds originate. NASA said Parker (the probe) has faced extreme heat on its record-
- () of the Sun. This is very close. Parker also holds another record. It is the fastest object ever built
- () closer to the Sun than any spacecraft has ever gone before. Parker flew to within 6.1 million kilometers
- (**1**) Things are heating up for the USA's National Aeronautical Space Administration (NASA). One of the agency's missions
- () life studying the Sun and its solar flares. He wanted to know why the flares, which shoot off from the Sun's
- () mystery for scientists. The temperature at the Sun's surface is around 4,100°C; while the temperature of the corona's
- () flares can reach 1.1 million degrees Celsius. Scientists also hope to find out how solar
- () The Parker Solar Probe is named after the astrophysicist Dr Eugene Parker. He spent most of his
- () star. The spacecraft is called the Parker Solar Probe. It made history on Christmas Eve by going
- () breaking fly-by. Temperatures reached a scorching 980 degrees Celsius.
- () the 10,846 km from New York to Tokyo in just 1.025 minutes.

PUT THE WORDS IN THE RIGHT ORDER

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

1. study . to is missions the One agency's of

2. probe photograph to A our research star . nearest

3. space Eve . probe on Christmas made The history

4. fastest humans . ever by object It's built the

5. . this probe speed, the 10,846 km travel At could

6. spent studying . most He life of his

7. problem . This known coronal heating is the as

8. It long-standing is for a mystery scientists .

9. winds . hope They solar to out find about

10. scorching reached 980 a Temperatures degrees Celsius .

CIRCLE THE CORRECT WORD (20 PAIRS)

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Things are heating *down / up* for the USA's National Aeronautical Space Administration (NASA). One *of / at* the agency's missions is to study the Sun. In 2018, NASA sent a small research probe to *photography / photograph* our nearest star. The spacecraft is *calling / called* the Parker Solar Probe. It made history *on / in* Christmas Eve by going closer to the Sun than any spacecraft has ever gone before. Parker flew to *wither / within* 6.1 million kilometers of the Sun. This is very *close / closed*. Parker also holds another record. It is the fastest object ever *built / builds* by humans. In September 2023, it flew *in / at* a speed of 635,266 kph. At this speed, the probe could travel the 10,846 km from New York to Tokyo in *adjust / just* 1.025 minutes.

The Parker Solar Probe is *naming / named* after the astrophysicist Dr Eugene Parker. He spent most of his *live / life* studying the Sun and its solar flares. He wanted to know *why / what* the flares, which shoot off from the Sun's surface, are *heated / hotter* than the surface. This is known *has / as* the "coronal heating problem". It is a long-standing mystery *for / at* scientists. The temperature at the Sun's surface is around 4,100°C; while the temperature of the corona's flares can *reach / beach* 1.1 million degrees Celsius. Scientists also hope to find out how *solar / lunar* winds originate. NASA said Parker (the probe) has *faced / headed* extreme heat on its record-breaking fly-by. Temperatures reached a *scorching / scratching* 980 degrees Celsius.

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

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

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

Th_ngs _r_ h__t_ng _p f_r th_ _S_'s N_t__n_l __r_n_t_c_l Sp_c_ _dm_n_str_t_n (N_S_). _n_ _f th_ _g_ncy's m_ss_ns _s t_ st_dy th_ S_n. _n 2018, N_S_ s_nt _ sm_ll r_s_rch pr_b_ t_ ph_t_gr_ph __r n_r_st st_r. Th_ sp_c_cr_ft _s c_ll_d th_ P_rk_r S_l_r Pr_b_. _t m_d_ h_st_ry _n Chr_stm_s _v_ by g__ng cl_s_r t_ th_ S_n th_n _ny sp_c_cr_ft h_s _v_r g_n_ b_f_r_. P_rk_r fl_w t_ w_th_n 6.1 m_ll_n k_l_m_t_rs _f th_ S_n. Th_s _s v_ry cl_s_. P_rk_r _ls_ h_lds _n_th_r r_c_rd. _t _s th_ f_st_st _bj_ct _v_r b__lt by h_m_ns. _n S_pt_mb_r 2023, _t fl_w _t _ sp__d _f 635,266 kph. _t th_s sp__d, th_ pr_b_ c__ld tr_v_l th_ 10,846 km fr_m N_w Y_rk t_ T_ky_ n j_st 1.025 m_n_t_s.

Th_ P_rk_r S_l_r Pr_b_ _s n_m_d _ft_r th_ _str_phys_c_st Dr __g_n_ P_rk_r. H_ sp_nt m_st _f h_s l_f_ st_dy_ng th_ S_n _nd _ts s_l_r fl_r_s. H_ w_nt_d t_ kn_w why th_ fl_r_s, wh_ch sh_t _ff fr_m th_ S_n's s_rf_c_, _r_ h_tt_r th_n th_ s_rf_c_. Th_s _s kn_wn _s th_ "c_r_n_l h_t_ng pr_bl_m". _t _s _ l_ng-st_nd_ng myst_ry f_r sc__nt_sts. Th_ t_mp_r_t_r_ _t th_ S_n's s_rf_c_ _s _r_nd 4,100°C; wh_l_ th_ t_mp_r_t_r_ _f th_ c_r_n's fl_r_s c_n r__ch 1.1 m_ll_n d_gr_s C_ls_s. Sc__nt_sts _ls_ h_p_ t_ f_nd __t h_w s_l_r w_nds _r_g_n_t_. N_S_ s__d P_rk_r (th_ pr_b_) h_s f_c_d _xtr_m_ h_t n_ ts r_c_rd-br__k_ng fly-by. T_mp_r_t_rs r__ch_d _ sc_rch_ng 980 d_gr_s C_ls_s.

PUNCTUATE THE TEXT AND ADD CAPITALS

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

things are heating up for the usas national aeronautical space administration nasa one of the agencys missions is to study the sun in 2018 nasa sent a small research probe to photograph our nearest star the spacecraft is called the parker solar probe it made history on christmas eve by going closer to the sun than any spacecraft has ever gone before parker flew to within 61 million kilometers of the sun this is very close parker also holds another record it is the fastest object ever built by humans in september 2023 it flew at a speed of 635266 kph at this speed the probe could travel the 10846 km from new york to tokyo in just 1025 minutes

the parker solar probe is named after the astrophysicist dr eugene parker he spent most of his life studying the sun and its solar flares he wanted to know why the flares which shoot off from the suns surface are hotter than the surface this is known as the coronal heating problem it is a longstanding mystery for scientists the temperature at the suns surface is around 4100c while the temperature of the coronas flares can reach 11 million degrees celsius scientists also hope to find out how solar winds originate nasa said parker the probe has faced extreme heat on its recordbreaking flyby temperatures reached a scorching 980 degrees celsius

PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

ThingsareheatingupfortheUSA'sNationalAeronauticalSpaceAdminis tration(NASA).Oneoftheagency'smissionsistostudytheSun.In2018, NASAsentasmallresearchprobetophotographourneareststar. Thesp acecraftiscalledtheParkerSolarProbe.ItmadehistoryonChristmasEv ebygoingclosertotheSunthananyspacecrafthasevergonebefore.Par kerflewtowithin6.1millionkilometersoftheSun.Thisisveryclose.Park eralsoholdsanotherrecord.Itisthefastestobjecteverbuiltbyhumans.I nSeptember2023, it flew at a speed of 635, 266 kph. At this speed, the pro becouldtravelthe10,846kmfromNewYorktoTokyoinjust1.025minut es.TheParkerSolarProbeisnamedaftertheastrophysicistDrEugenePa rker.HespentmostofhislifestudyingtheSunanditssolarflares.Hewant edtoknowwhytheflares,whichshootofffromtheSun'ssurface,arehott erthanthesurface. This is known as the "coronal heating problem". It is al ong-standingmysteryforscientists.ThetemperatureattheSun'ssurf aceisaround4,100°C; while the temperature of the corona's flares canr each1.1milliondegreesCelsius.Scientistsalsohopetofindouthowsola rwindsoriginate.NASAsaidParker(theprobe)hasfacedextremeheato nitsrecord-breakingfly-by.Temperaturesreachedascorching980de greesCelsius.

FREE WRITING

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

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

ACADEMIC WRITING

From https://breakingnewsenglish.com/2412/241226-parker-solar-probe.html

We need to know more about the Sun. 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: Make a poster about the Sun. Show your work to your classmates in the next lesson. Did you all have similar things?

4. MORE RESEARCH: Write a magazine article about spending more money on research on the Sun. 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. Ask him/her three questions about it. Give him/her three of your thoughts on the Sun. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

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

TRUE / FALSE (p.5)

1 F 2 T 3 T 4 F 5 F 6 T	7 T 8 F
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1.

SYNONYM MATCH (p.5)

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

COMPREHENSION QUESTIONS (p.9)

- 1. National Aeronautical Space Administration
- 2. 2018
- 3. Christmas Eve
- 4. The fastest object ever made.
- 5. 1.025 minutes
- 6. The Sun
- 7. (Corona) flares
- 8. Around 4,100°C
- 9. Solar winds
- 10. 980 degrees Celsius

WORDS IN THE RIGHT ORDER (p.19)

- One of the agency's missions is to study.
- 2. A research probe to photograph our nearest star.
- 3. The space probe made history on Christmas Eve.
- 4. It's the fastest object ever built by humans.
- 5. At this speed, the probe could travel 10,846 km.
- 6. He spent most of his life studying.
- 7. This is known as the coronal heating problem.
- 8. It is a long-standing mystery for scientists.
- 9. They hope to find out about solar winds.
- 10. Temperatures reached a scorching 980 degrees Celsius.

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 ;-)