Breaking News English.com

Ready-to-Use English Lessons by Sean Banville

Level 6 – 17th March 2025

Earth's core may hold ancient pre-Big Bang gas

FREE online quizzes, mp3 listening and more for this lesson here:
https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Contents

Please try Levels 4 and 5 (they are easier).

THE ARTICLE

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Our planet contains mysteries that are yet to be unravelled. Many of them focus on how the Earth formed, and what is at the centre of our planet. A recent study provides clues as to what shaped Earth at the beginnings of our solar system. Scientists say they have discovered evidence that vast amounts of a rare, primordial form of the gas helium may be trapped inside Earth's core. It is called helium-3. Scientists from universities in Japan and Taiwan believe the helium-3 is from a giant cloud of gas and dust that amalgamated to create different planets. The gas has remained locked inside Earth's mantle for billions of years, but is occasionally released in volcanic eruptions.

The research paper has created considerable excitement among planetary geologists. They believe the presence of large amounts of helium-3 could unlock more secrets of the Big Bang. In particular, the scientists are speculating that there being so much helium-3 under the Earth's mantle could mean that Earth was created much more quickly than previously thought. Dr Peter Olson, a geophysicist at the University of New Mexico, shed light on the possible speed of Earth's creation. He said: "There is evidence that has been interpreted to say the Earth formed very slowly, requiring 100 million years. [However], you wouldn't get much helium deep in the Earth if the Earth formed that slowly."

Sources: https://**scitechdaily.com**/earths-core-may-hold-hidden-reservoirs-of-helium-scientists-discover/
https://www.**msn.com**/en-us/news/technology/primordial-helium-from-the-birth-of-the-solar-system-may-be-stuck-in-earths-core/ar-AA1AagXf
https://www.**chemistryworld.com**/news/centre-of-the-earth-could-hold-large-reservoir-of-iron-helium-compounds/4021097.article

WARM-UPS

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

> planet / focus / Earth / solar system / evidence / helium / universities / eruptions / research paper / excitement / geologists / secrets / geophysicist / speed / creation

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

3. KNOWING: Students A **strongly** believe it's very important to know how long it took for Earth to form; Students B **strongly** believe it isn't. Change partners again and talk about your conversations.

4. SPACE: What do you know about the things in the table? 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 Big Bang		
Our solar system		
Planets		
Asteroids		
The ISS		
The Sun		

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

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

- The Big Bang
- Aliens
- Ghosts
- The Yeti
- The sixth sense
- The Pyramids
- Life
- The Bermuda Triangle

VOCABULARY MATCHING

Paragraph 1

1.	unravelled	a.	The very middle or centre of something.
2.	evidence	b.	When something, like a volcano, suddenly explodes or bursts out.
3.	vast	c.	To become untangled or solved; when something that was confusing becomes clear.
4.	primordial	d.	Facts or things that show something is true.
5.	core	e.	Very old, from the beginning of time.
6.	amalgamated	f.	Joined or mixed together.
7.	eruption	g.	Very big or very large.

Paragraph 2

8.	geologist	h.	To help people understand something better.
9.	Big Bang	i.	A scientist who studies the inside of the Earth.
10.	speculating	j.	The layer of rock inside the Earth, under the surface.
11.	mantle	k.	A scientist who studies rocks and the Earth.
12.	geophysicist	l.	Explained or understood in a certain way.
13.	shed light on	m.	The big explosion that scientists believe created the universe.
14.	interpreted	n.	Guessing about something without knowing all the facts.

BEFORE READING / LISTENING

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

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

1. The article says there are many unrivalled mysteries about our planet. **T / F**
2. A study conclusively found out what shaped the solar system. **T / F**
3. Helium-3 is a medieval from of the gas helium-4. **T / F**
4. Helium-3 is occasionally released when a volcano erupts. **T / F**
5. Planetary geophysicists are paying scant regard to the new research. **T / F**
6. There could be more helium-3 beneath our feet than we thought. **T / F**
7. A geophysicist helped us know more about the speed of Earth's creation. **T / F**
8. The geophysicist said Earth would form faster with more helium-3. **T / F**

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

1. mysteries	a. proof
2. unravelled	b. made clearer
3. clues	c. merged
4. evidence	d. theorizing
5. amalgamated	e. solved
6. considerable	f. formation
7. speculating	g. pointers
8. shed light on	h. necessitating
9. creation	i. secrets
10. requiring	j. sizeable

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

1. Our planet contains mysteries that are yet	a. amalgamated
2. vast amounts of a rare, primordial	b. mantle
3. a giant cloud of gas and dust that	c. deep in the Earth
4. The gas has remained locked inside Earth's	d. eruptions
5. occasionally released in volcanic	e. excitement
6. The research paper has created considerable	f. of the Big Bang
7. planetary	g. light on
8. unlock more secrets	h. to be unravelled
9. shed	i. geologists
10. you wouldn't get much helium	j. form of the gas

GAP FILL

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Our planet contains (1) _____ that are yet to be unravelled. Many of them focus on how the Earth (2) _____, and what is at the centre of our planet. A recent study provides clues as to what shaped Earth at the beginnings of our (3) _____ system. Scientists say they have discovered evidence that (4) _____ amounts of a rare, primordial form of the gas helium may be trapped inside Earth's (5) _____. It is called helium-3. Scientists from universities in Japan and Taiwan believe the helium-3 is from a giant cloud of gas and (6) _____ that amalgamated to create different planets. The gas has remained (7) _____ inside Earth's mantle for billions of years, but is occasionally released in volcanic (8) _____.

solar

core

eruptions

mysteries

locked

formed

vast

dust

The research paper has created (9) _____ excitement among planetary geologists. They believe the (10) _____ of large amounts of helium-3 could unlock more secrets of the Big Bang. In particular, the scientists are (11) _____ that there being so much helium-3 under the Earth's mantle could mean that Earth was created much more quickly than (12) _____ thought. Dr Peter Olson, a geophysicist at the University of New Mexico, (13) _____ light on the possible speed of Earth's creation. He said: "There is (14) _____ that has been interpreted to say the Earth formed very slowly, (15) _____ 100 million years. [However], you wouldn't get much helium (16) _____ in the Earth if the Earth formed that slowly."

previously

presence

deep

shed

requiring

considerable

speculating

evidence

LISTENING – Guess the answers. Listen to check.

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

1) Our planet contains mysteries that are yet _____
   a. to be unravelled
   b. to be unrivalled
   c. to be unparallelled
   d. to be unveiled
2) A recent study provides clues as to _____
   a. what sharpened Earth
   b. what scraped Earth
   c. what scuppered Earth
   d. what shaped Earth
3) a rare, primordial form of the gas helium may be trapped _____
   a. inside Earth's cor
   b. inside Earth's care
   c. inside Earth's core
   d. inside Earth's chore
4) believe the helium-3 is from a giant cloud of gas and _____
   a. dust that amalgamate
   b. dust that amalgamated
   c. dust that amalgamate it
   d. dust that amalgamate Ted
5) Earth's mantle for billions of years, but is occasionally released _____
   a. in volcano eruptions
   b. in volcanic eruptions
   c. in volcanic eruption
   d. in volcano eruption
6) The research paper has created considerable excitement _____
   a. among plan it teary geologists
   b. among planetary geologists
   c. among planet cherry geologists
   d. among planetary geologist
7) the presence of large amounts of helium-3 could _____
   a. unload more secrets
   b. unlock more secret
   c. unlock more secrets
   d. unlock moor secrets
8) Earth was created much more quickly _____
   a. than previous thought
   b. than previously thoughts
   c. than previously thinking
   d. than previously thought
9) Olson, a geophysicist at the University of New Mexico, shed light on _____
   a. the possibility speed
   b. the impossible speed
   c. the impossibility speed
   d. the possible speed
10) He said there is evidence that _____
   a. has being interpreted
   b. has been interpret it
   c. has been interpreter
   d. has been interpreted

LISTENING – Listen and fill in the gaps

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Our planet contains mysteries that are (1) _____ unravelled. Many of them focus on how the Earth formed, and what is at the centre of our planet. A recent study (2) _____ to what shaped Earth at the beginnings of our solar system. Scientists say they have discovered evidence that (3) _____ a rare, primordial form of the gas helium may (4) _____ Earth's core. It is called helium-3. Scientists from universities in Japan and Taiwan believe the helium-3 is from a giant cloud of (5) _____ that amalgamated to create different planets. The gas has remained locked inside Earth's mantle for billions of years, but (6) _____ in volcanic eruptions.

The research paper (7) _____ excitement among planetary geologists. They believe (8) _____ large amounts of helium-3 could unlock more secrets of the Big Bang. In particular, the scientists (9) _____ there being so much helium-3 under the Earth's (10) _____ that Earth was created much more quickly than previously thought. Dr Peter Olson, a geophysicist at the University of New Mexico, (11) _____ the possible speed of Earth's creation. He said: "There is evidence that has been interpreted to say the Earth formed very slowly, (12) _____ years. [However], you wouldn't get much helium deep in the Earth if the Earth formed that slowly."

COMPREHENSION QUESTIONS

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

1. What does Earth contain that hasn't been unravelled yet?

2. How much helium-3 do scientists believe they have discovered?

3. Where is the helium-3 trapped?

4. What mixed with gas to form planets?

5. How is helium-3 released from the Earth's core?

6. Who is particularly excited about the discovery of the helium-3?

7. What could the helium-3 unlock secrets of?

8. What did do scientists say about the speed with which Earth formed?

9. What is Peter Olson's job?

10. How long did scientists think it took Earth to form?

MULTIPLE CHOICE - QUIZ

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

1) What does Earth contain that hasn't been unravelled yet?
a) string
b) mysteries
c) a black hole
d) a shooting star

2) How much helium-3 do scientists believe they have discovered?
a) a few molecules
b) a tiny amount
c) vast amounts
d) about 23.6 kg

3) Where is the helium-3 trapped?
a) in a cave
b) in space
c) inside a piece if rock
d) inside Earth's core

4) What mixed with gas to form planets?
a) water
b) dust
c) ice
d) plasma

5) How is helium-3 released from the Earth's core?
a) volcanic eruptions
b) during earthquakes
c) through geothermal activity
d) through cracks in the ground

6) Who is particularly excited about the discovery of the helium-3?
a) planetary geologists
b) astrophysicists
c) chemistry teachers
d) helium balloon makers

7) What could the helium-3 unlock secrets of?
a) the universe
b) the meaning of life
c) weather patterns
d) the Big Bang

8) What did do scientists say about the speed with which Earth formed?
a) It followed normal patterns.
b) It was painfully slow.
c) It formed quicker than previously thought.
d) It was miraculously quick

9) What is Peter Olson's job?
a) He's a biophysicist
b) He's a quantum physicist.
c) He's an astrophysicist.
d) He's a geophysicist.

10) How long did scientists think it took Earth to form?
a) 200 million years
b) 100 million years
c) 300 million years
d) a billion years

ROLE PLAY

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Role A – The Big Bang

You think the Big Bang is the biggest mystery. Tell the others three reasons why. Tell them why their things aren't so mysterious. Also, tell the others which is the least mysterious of these (and why): the Bermuda Triangle, the Pyramids or our sixth sense.

Role B – The Bermuda Triangle

You think the Bermuda Triangle is the biggest mystery. Tell the others three reasons why. Tell them why their things aren't so mysterious. Also, tell the others which is the least mysterious of these (and why): the Big Bang, the Pyramids or our sixth sense.

Role C – The Pyramids

You think the Pyramids are the biggest mystery. Tell the others three reasons why. Tell them why their things aren't so mysterious. Also, tell the others which is the least mysterious of these (and why): the Bermuda Triangle, the Big Bang or our sixth sense.

Role D – Our Sixth Sense

You think our sixth sense is the biggest mystery. Tell the others three reasons why. Tell them why their things aren't so mysterious. Also, tell the others which is the least mysterious of these (and why): the Bermuda Triangle, the Pyramids or the Big Bang.

AFTER READING / LISTENING

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

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

Earth	**ancient**

- 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:

• contains • shaped • vast • giant • locked • occasionally	•considerable •large •mean •shed •100 •deep

THE EARTH SURVEY

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Write five GOOD questions about the Earth 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 EARTH 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 'Earth'?
3. What do you know about the Big Bang?
4. What other ideas do people have about how earth was created?
5. How important is it to know about the creation of earth?
6. What do you know about our solar system?
7. Do you think there are other life forms out there?
8. What did Earth look like 100 million years ago?
9. What is your favourite planet?
10. What do you know about volcanoes?

Earth's core may hold ancient pre-Big Bang gas – 17th March 2025
Thousands more free lessons at breakingnewsenglish.com

THE EARTH 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 'Big Bang'?
13. What do you think about what you read?
14. What do you know about helium?
15. How do you think the Earth was created?
16. What do you think is in the centre of the Earth?
17. Will it ever be possible to journey to the Earth's core?
18. Which of Earth's mysteries would you like scientists to unravel?
19. What will Earth be like in 100 million years from now?
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. _____

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/2503/250317-primordial-helium.html

Our planet contains mysteries that are yet to be (1) _____. Many of them focus on how the Earth formed, and what is at the centre of our planet. A recent study (2) _____ clues as to what shaped Earth at the beginnings of our solar system. Scientists say they have discovered evidence that (3) _____ amounts of a rare, primordial (4) _____ of the gas helium may be trapped inside Earth's core. It is called helium-3. Scientists from universities in Japan and Taiwan believe the helium-3 is from a giant cloud of gas and dust that (5) _____ to create different planets. The gas has remained locked inside Earth's mantle for billions of years, but is occasionally released in volcanic (6) _____.

The research paper has created considerable excitement among planetary geologists. They believe the (7) _____ of large amounts of helium-3 could unlock more secrets of the Big Bang. In particular, the scientists are speculating that there (8) _____ so much helium-3 under the Earth's mantle could mean that Earth was created much more quickly than previously thought. Dr Peter Olson, a geophysicist at the University of New Mexico, (9) _____ light on the possible speed of Earth's creation. He said: "There is evidence that has been interpreted (10) _____ say the Earth formed very slowly, (11) _____ 100 million years. [However], you wouldn't get much helium deep in the Earth if the Earth formed (12) _____ slowly."

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

1.	(a)	unrivalled	(b)	unravelled	(c)	rivalled	(d)	unrivalled
2.	(a)	upends	(b)	provides	(c)	signals	(d)	hands out
3.	(a)	baste	(b)	paste	(c)	dust	(d)	vast
4.	(a)	frame	(b)	form	(c)	from	(d)	firm
5.	(a)	amalgamate	(b)	amalgamates	(c)	amalgamating	(d)	amalgamated
6.	(a)	contraptions	(b)	disruptions	(c)	eruptions	(d)	contortions
7.	(a)	presence	(b)	presents	(c)	being	(d)	state
8.	(a)	has	(b)	is	(c)	being	(d)	form
9.	(a)	shelter	(b)	hut	(c)	cabin	(d)	shed
10.	(a)	to	(b)	as	(c)	at	(d)	by
11.	(a)	requiring	(b)	requires	(c)	required	(d)	requirement
12.	(a)	that	(b)	what	(c)	such	(d)	unnecessarily

SPELLING

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Paragraph 1

1. mysteries that are yet to be dleurvanle

2. the beginnings of our srola mysets

3. they have discovered ecedvine

4. a rare, aoridmplir form of the gas helium

5. gas and dust that gmatlamaade

6. released in volcanic unotripse

Paragraph 2

7. created oedcnsiraelb excitement

8. among planetary sgilogetso

9. scientists are tgilpaesunc

10. under the Earth's tnlame

11. a ihpsecogyist at the University of New Mexico

12. that has been terdnepteri

PUT THE TEXT BACK TOGETHER

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Number these lines in the correct order.

( ) 100 million years. [However], you wouldn't get much helium deep in the Earth if the Earth formed that slowly."

( ) at the University of New Mexico, shed light on the possible speed of Earth's creation. He said: "There is evidence

( ) core. It is called helium-3. Scientists from universities in Japan and Taiwan believe the helium-3 is from a giant cloud

( ) created much more quickly than previously thought. Dr Peter Olson, a geophysicist

( ) evidence that vast amounts of a rare, primordial form of the gas helium may be trapped inside Earth's

( ) formed, and what is at the centre of our planet. A recent study provides clues as

( ) inside Earth's mantle for billions of years, but is occasionally released in volcanic eruptions.

( ) of gas and dust that amalgamated to create different planets. The gas has remained locked

( ) of large amounts of helium-3 could unlock more secrets of the Big Bang. In particular, the scientists are

(***1***) Our planet contains mysteries that are yet to be unravelled. Many of them focus on how the Earth

( ) speculating that there being so much helium-3 under the Earth's mantle could mean that Earth was

( ) that has been interpreted to say the Earth formed very slowly, requiring

( ) The research paper has created considerable excitement among planetary geologists. They believe the presence

( ) to what shaped Earth at the beginnings of our solar system. Scientists say they have discovered

PUT THE WORDS IN THE RIGHT ORDER

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

1. Mysteries yet are that to unravelled be .

2. Many them of focus how on formed Earth .

3. They vast discovered amounts gas of the helium .

4. Gas dust and amalgamated create to different planets .

5. The gas remained has inside locked Earth's mantle .

6. The paper research created has considerable excitement .

7. Helium-3 unlock could more secrets the of Big Bang .

8. Earth created was quickly more than thought previously .

9. A shed geophysicist light on possible the speed .

10. You wouldn't helium get deep in Earth the .

CIRCLE THE CORRECT WORD (20 PAIRS)

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Our planet contains mysteries that are yet to *being / be* unravelled. Many of them focus on *how / what* the Earth formed, and what is at the centre of our planet. A *recent / recently* study provides clues as to what shaped Earth at the beginnings of our *polar / solar* system. Scientists say they have discovered *evidential / evidence* that vast amounts of a rare, primordial form of the gas helium may be trapped inside Earth's *corps / core*. It is called helium-3. Scientists from universities in Japan and Taiwan *believe / belief* the helium-3 is from a giant cloud of gas and *rust / dust* that amalgamated to create different planets. The gas has remained locked inside Earth's *mantle / meddle* for billions of years, but is occasionally released in volcanic *eruptions / contraptions*.

The research paper has created *consider / considerable* excitement among planetary geologists. They believe the *presents / presence* of large amounts of helium-3 could unlock more *secrets / secretes* of the Big Bang. *In / On* particular, the scientists are speculating that *is / there* being so much helium-3 under the Earth's mantle could mean that Earth was created much more *quickly / quicker* than previously thought. Dr Peter Olson, a geophysicist at the University of New Mexico, shed light *of / on* the possible speed of Earth's creation. He said: "There is evidence *what / that* has been interpreted to say the Earth formed very *slowly / slow*, requiring 100 million years. [However], you wouldn't get *many / much* helium deep in the Earth if the Earth formed that slowly."

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/2503/250317-primordial-helium.html

__r pl_n_t c_nt__ns myst_r__s th_t _r_ y_t t_ b_ _nr_v_ll_d. M_ny _f th_m f_c_s _n h_w th_ __rth f_rm_d, _nd wh_t _s _t th_ c_ntr_ _f __r pl_n_t. _ r_c_nt st_dy pr_v_d_s cl__s _s t_ wh_t sh_p_d __rth _t th_ b_g_nn_ngs _f __r s_l_r syst_m. Sc__nt_sts s_y th_y h_v_ d_sc_v_r_d _v_d_nc_ th_t v_st _m__nts _f _ r_r_, pr_m_rd__l f_rm _f th_ g_s h_l__m m_y b_ tr_pp_d _ns_d_ __rth's c_r_. _t _s c_ll_d h_l__m-3. Sc__nt_sts fr_m _n_v_rs_t__s _n J_p_n _nd T__w_n b_l__v_ th_ h_l__m-3 _s fr_m _ g__nt cl__d _f g_s _nd d_st th_t _m_lg_m_t_d t_ cr__t_ d_ff_r_nt pl_n_ts. Th_ g_s h_s r_m__n_d l_ck_d _ns_d_ __rth's m_ntl_ f_r b_ll__ns _f y__rs, b_t _s _cc_s__n_lly r_l__s_d _n v_lc_n_c _r_pt__ns.

Th_ r_s__rch p_p_r h_s cr__t_d c_ns_d_r_bl_ _xc_t_m_nt _m_ng pl_n_t_ry g__l_g_sts. Th_y b_l__v_ th_ pr_s_nc_ _f l_rg_ _m__nts _f h_l__m-3 c__ld _nl_ck m_r_ s_cr_ts _f th_ B_g B_ng. _n p_rt_c_l_r, th_ sc__nt_sts _r_ sp_c_l_t_ng th_t th_r_ b__ng s_ m_ch h_l__m-3 _nd_r th_ __rth's m_ntl_ c__ld m__n th_t __rth w_s cr__t_d m_ch m_r_ q__ckly th_n pr_v___sly th__ght. Dr P_t_r _ls_n, _ g__phys_c_st _t th_ _n_v_rs_ty _f N_w M_x_c_, sh_d l_ght _n th_ p_ss_bl_ sp__d _f __rth's cr__t__n. H_ s__d: "Th_r_ _s _v_d_nc_ th_t h_s b__n _nt_rpr_t_d t_ s_y th_ __rth f_rm_d v_ry sl_wly, r_q__r_ng 100 m_ll__n y__rs. [H_w_v_r], y__ w__ldn't g_t m_ch h_l__m d__p _n th_ __rth _f th_ __rth f_rm_d th_t sl_wly."

PUNCTUATE THE TEXT AND ADD CAPITALS

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

our planet contains mysteries that are yet to be unravelled many of them focus on how the earth formed and what is at the centre of our planet a recent study provides clues as to what shaped earth at the beginnings of our solar system scientists say they have discovered evidence that vast amounts of a rare primordial form of the gas helium may be trapped inside earths core it is called helium3 scientists from universities in japan and taiwan believe the helium3 is from a giant cloud of gas and dust that amalgamated to create different planets the gas has remained locked inside earths mantle for billions of years but is occasionally released in volcanic eruptions

the research paper has created considerable excitement among planetary geologists they believe the presence of large amounts of helium3 could unlock more secrets of the big bang in particular the scientists are speculating that there being so much helium3 under the earths mantle could mean that earth was created much more quickly than previously thought dr peter olson a geophysicist at the university of new mexico shed light on the possible speed of earths creation he said there is evidence that has been interpreted to say the earth formed very slowly requiring 100 million years however you wouldnt get much helium deep in the earth if the earth formed that slowly

PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

Ourplanetcontainsmysteriesthatareyettobeunravelled.Manyofthem focusonhowtheEarthformed,andwhatisatthecentreofourplanet.Arec entstudyprovidescluesastowhatshapedEarthatthebeginningsofours olarsystem.Scientistssaytheyhavediscoveredevidencethatvastamo untsofarare,primordialformofthegasheliummaybetrappedinsideEar th'score.Itiscalledhelium-3.ScientistsfromuniversitiesinJapanand Taiwanbelievethehelium-3isfromagiantcloudofgasanddustthatamal gamatedtocreatedifferentplanets.Thegashasremainedlockedinside Earth'smantleforbillionsofyears,butisoccasionallyreleasedinvolcani ceruptions.Theresearchpaperhascreatedconsiderableexcitementa mongplanetarygeologists.Theybelievethepresenceoflargeamounts ofhelium-3couldunlockmoresecretsoftheBigBang.Inparticular,thes cientistsarespeculatingthattherebeingsomuchhelium-3undertheEar th'smantlecouldmeanthatEarthwascreatedmuchmorequicklythanpr eviouslythought.DrPeterOlson,ageophysicistattheUniversityofNew Mexico,shedlightonthepossiblespeedofEarth'screation.Hesaid:"The reisevidencethathasbeeninterpretedtosaytheEarthformedveryslowl y,requiring100millionyears.[However],youwouldn'tgetmuchhelium deepintheEarthiftheEarthformedthatslowly."

FREE WRITING

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

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

ACADEMIC WRITING

From https://breakingnewsenglish.com/2503/250317-primordial-helium.html

It is very important to know how Earth formed. 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 EARTH: Make a poster about the Earth. Show your work to your classmates in the next lesson. Did you all have similar things?

4. EARTH'S CORE: Write a magazine article about governments spending lots of money to get to Earth's core. 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 Earth. Ask him/her three questions about it. Give him/her three of your ideas on why it's important to understand Earth's origins. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

1.	c	2.	d	3.	g	4.	e	5.	a	6.	f	7.	b
8.	k	9.	m	10.	n	11.	j	12.	i	13.	h	14.	l

TRUE / FALSE (p.5)

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

SYNONYM MATCH (p.5)

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

COMPREHENSION QUESTIONS (p.9)

1. Mysteries
2. Vast amounts
3. Inside Earth's core
4. Dust
5. Volcanic eruptions
6. Planetary geologists
7. The Big Bang
8. It formed quicker than previously thought.
9. He's a geophysicist.
10. 100 million years

WORDS IN THE RIGHT ORDER (p.19)

1. Mysteries that are yet to be unravelled.
2. Many of them focus on how Earth formed.
3. They discovered vast amounts of the gas helium.
4. Gas and dust amalgamated to create different planets.
5. The gas has remained locked inside Earth's mantle.
6. The research paper has created considerable excitement.
7. Helium-3 could unlock more secrets of the Big Bang.
8. Earth was created more quickly than previously thought.
9. A geophysicist shed light on the possible speed.
10. You wouldn't get helium deep in the Earth.

MULTIPLE CHOICE - QUIZ (p.10)

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

ALL OTHER EXERCISES

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