



Titan's Methane-filled Ice Layer Revealed

Description

New research suggests that Saturn's moon Titan has a thick ice cover that could be warming lower areas and supporting molecular growth. Scientists from the University of Hawaii found this information. They studied Titan using data from NASA's Cassini spacecraft. The researchers discovered that Titan has a thick layer of solid water ice with methane gas trapped inside. This icy crust is believed to warm Titan's interior, causing changes to its surface structure. The surface temperature of Titan is extremely cold at about minus 179 degrees Celsius. Despite the cold, the methane gas trapped within the ice could help warm surface levels. This could support the rise of molecules toward the surface. NASA plans to send another spacecraft to Titan in 2028 to gather more information. Titan is an important place to study how methane affects atmospheres, providing insights for Earth as well.

Vocabulary List:

1. **Research** /'ri:sɜ:rtʃ/ (noun): The systematic investigation into a subject to discover or revise facts.
2. **Molecular** /mə'leɪ.kjə.lər/ (adjective): Relating to or consisting of molecules.
3. **Methane** /'meθ.eɪn/ (noun): A colorless odorless flammable gas that is the simplest alkane.
4. **Temperature** /'tɛm.pə.rə.tʃər/ (noun): The degree of heat present in a substance or object.
5. **Atmospheres** /'ætməs,fɪrɪz/ (noun): The gaseous mass surrounding a celestial body.
6. **Structure** /'strʌk.tʃər/ (noun): The arrangement of and relations between the parts or elements of something complex.

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Which branch of science deals with the study of molecules?
Option: Physics
Option: Chemistry
Option: Biology
Option: Geology
2. Who is known for exploring and documenting the Amazon rainforest?
Option: Dr. Jane Goodall
Option: Neil Armstrong



Option: David Attenborough

Option: Indiana Jones

3. What term refers to the ability to use or retrieve data?

Option: Privacy

Option: Accessibility

Option: Encryption

Option: Storage

4. What is essential before undertaking a challenging task?

Option: Celebrate

Option: Procrastinate

Option: Prepare

Option: Analyze

5. Which skill is vital for effective teamwork?

Option: Technicality

Option: Communication

Option: Isolation

Option: Rudeness

6. What stimulates growth and development?

Option: Comfort

Option: Challenges

Option: Routine

Option: Mediocrity

7. What are catastrophic events that cause significant damage?

Option: Celebrations

Option: Achievements

Option: Disasters

Option: Innovations

8. Who has the power to make decisions and enforce obedience?

Option: Celebrity

Option: Boss

Option: Authority

Option: Entertainer

9. What term is used when two or more entities combine into one?

Option: Split

Option: Divide

Option: Merge



Option: Isolate

10. Which term describes highly developed or complex technologies?

Option: Basic

Option: Simple

Option: Intermediate

Option: Advanced

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. _____ is a greenhouse gas with a global warming potential more than 25 times that of carbon dioxide.

12. The _____ of a system is a measure of the average kinetic energy of the particles in the system.

13. The _____ of a film is responsible for overseeing the entire production process.

14. _____ between team members is crucial for the success of a project.

15. The _____ of a protein is essential for its function in biological systems.

16. Environmental _____ have led to worldwide efforts to reduce carbon emissions.

17. Regular practice can improve an athlete's _____ in competitions.

18. A supportive environment can _____ individuals to achieve their goals.

19. Recognizing the _____ of a task can increase one's dedication to completing it.

20. Some people are more _____ to criticism than others.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Different planets in our solar system have unique compositions of gases in their .

22. The DNA of a human shares about 98% similarity with that of a .

23. The success of a play depends on engaging the with the performance.



24. An archeologist or historian is often considered an due to their research expeditions.
25. One's traits are a combination of characteristics and behaviors that define them.
26. A government official appointed as head of a particular department is known as a .
27. Companies often engage in healthy to capture a larger market share.
28. Building trust with others often involves keeping one's .
29. Effective leaders address the of their team members to ensure a harmonious work environment.
30. Artists often develop unique styles and methods referred to as artistic .

Answer

Multiple Choice: 1. Chemistry 2. David Attenborough 3. Accessibility 4. Prepare 5. Communication 6. Challenges 7. Disasters 8. Authority 9. Merge 10. Advanced

Gap-Fill: 11. Methane 12. Temperature 13. Director 14. Collaboration 15. Structure 16. Concern 17. Performance 18. Motivate 19. Importance 20. Sensitive

Matching sentence: 1. Atmospheres 2. Chimpanzee 3. Audience 4. Explorer 5. Personality 6. Commissioner 7. Competition 8. Promise 9. Concerns 10. Techniques

CATEGORY

1. Sci/Tech - LEVEL1

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