
A recent study suggests that Uranus and Neptune might not consist of what we previously believed.

Description

While we've always held the belief that Uranus and Neptune, the ice giants of our solar system, are abundant in frozen water, a new study suggests another interesting fact: these icy planets could also house a significant amount of methane ice. As our understanding of these mystifying bodies remains limited (they've only had one visitor, Voyager 2, back in the 1980s), these findings might just solve a crucial puzzle about their origins.

Voyager 2 and Earth-based telescopic readings have allowed astronomers to devise models of what these ice giants could be made of, but they give no explanation about how they came to be. Uri Malamud, lead author of the study, has proposed a solution. As these planets formed, they might have accreted carbon-rich objects, not unlike comets hailing from the Kuiper Belt. This throws up an intriguing question: "How is it possible to form an icy giant from ice-poor building blocks?"

To address this, Malamud and his team constructed several models of the interiors of Uranus and Neptune. Using an algorithm, they considered diverse elemental composition, including iron, water, and methane. Astonishingly, the models that bore resemblance to the actual ice giants were those abundant in methane, which resembled either solid lumps or a mushy layer due to pressure. Therefore, the presence of methane is potentially crucial in explaining how these icy giants composed of carbon-rich building blocks could go on to form an ice shell.

Despite these exciting findings, confirming the methane-rich composition may prove to be difficult. Future NASA missions that aim for exploring Uranus could hold the key. This research once again underlines our limited understanding of the outermost reaches of the solar system, pushing us to keep exploring and studying these fascinating celestial bodies.

Vocabulary List:

1. **Abundant** // (adjective): Existing in large quantities plentiful.
2. **Accreted** // (verb): Grew or accumulated by gradual addition.
3. **Astronomers** // (noun): Scientists who study spacecelestial objectsand the universe.
4. **Celestial** // (adjective): Relating to the sky or outer space.
5. **Composition** // (noun): The nature of somethingparticularly the way it is put together or arranged.
6. **Crucial** // (adjective): Extremely important or necessary.

Vocabulary quizzes

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

1. What is the term for the act of calling off an event or reservation?

- Option: Refund
- Option: Transparency
- Option: Cancellation
- Option: Reassurance

2. Which word means existing in large quantities?

- Option: Vegetarian
- Option: Abundant
- Option: Substantial
- Option: Elastomer

3. What term is used to describe objects related to the sky or outer space?

- Option: Composition
- Option: Crucial
- Option: Celestial
- Option: Etiquette

4. In terms of space what does the term "distance" refer to?

- Option: Amateur
- Option: Elliptical
- Option: Kombat
- Option: Distance

5. Which term refers to the resistance of a fluid to flow?

- Option: Metafluid
- Option: Viscosity
- Option: Elastomer
- Option: Asteroid

6. What word means of considerable importance size or worth?

- Option: Vegetarian
- Option: Substantial
- Option: Debate
- Option: Rumors

7. What is the process of giving someone their money back after cancellation or return?

Option: Reassurance

Option: Humiliation

Option: Reimbursement

Option: Surprises

8. What term describes a character whose gender has been changed from the original?

Option: Kombat

Option: DLC

Option: Gender-swapped

Option: Surprises

9. What word is commonly used to describe unauthorized release of information?

Option: Vertebrate

Option: Humiliation

Option: Spectacle

Option: Leak

10. Who are scientists that study celestial objects such as stars planets and galaxies?

Option: Accreted

Option: Astronomers

Option: Composition

Option: Crucial

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

11. If a product is returned the customer may receive a _____.

12. Businesses often strive for _____ in their operations to build trust with consumers.

13. Good communication is _____ in maintaining healthy relationships.

14. Being publicly embarrassed can lead to feelings of _____.

15. Life is full of unexpected _____ both good and bad.

16. Interest on a loan is _____ over time.

17. The _____ of a painting can greatly affect its overall impact.

18. Someone who does not eat meat may be described as a _____.



19. A healthy _____ can lead to new perspectives and understanding.

20. Understanding social _____ is important for navigating various situations gracefully.

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

21. Rubber is an example of a material classified as an due to its elasticity and resilience.

22. The grand fireworks display was a dazzling that left the audience in awe.

23. An is a rocky body that orbits the Sun often found in the asteroid belt between Mars and Jupiter.

24. An photographer captured stunning images of the night sky.

25. Many galaxies have an shape rather than being perfectly round.

26. Scientists are researching the properties of that exhibit unique flow behaviors.

27. Players engage in intense virtual battles in the game .

28. Many gamers eagerly await new downloadable content known as to enhance their gaming experience.

29. Celebrity gossip columns are often filled with juicy about famous personalities.

30. The doctor took the time to the patient that the surgery would go smoothly.

Answer

Multiple Choice: 1. Cancellation 2. Abundant 3. Celestial 4. Distance 5. Viscosity 6. Substantial 7. Reimbursement 8. Gender-swapped 9. Leak 10. Astronomers

Gap-Fill: 11. Refund 12. Transparency 13. Crucial 14. Humiliation 15. Surprises 16. Accrued 17. Composition 18. Vegetarian 19. Debate 20. Etiquette

Matching sentence: 1. Elastomer 2. Spectacle 3. Asteroid 4. Amateur 5. Elliptical 6. Metafluid 7. Kombat 8. DLC 9. Rumors 10. Reassure

CATEGORY

1. Sci/Tech - LEVEL5

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