



JWST Witnesses the Dawn of Starlight

Description

The ARC Centre of Excellence for All Sky Astrophysics in 3D (ASTRO 3D) has released new findings about the early universe that challenge current theories. Using the James Webb Space Telescope, an international research team observed an ancient galaxy merger and discovered rapid, efficient star formation.

The team found that galaxies and stars developed faster after the Big Bang than expected. Observations of one of the very first galaxies also revealed that its growth was much quicker than previously believed. The research team also found that these early galaxies were able to accumulate mass quickly through merging.

Dr. Kit Boyett, an ASTRO 3D Research Fellow, said that their observations showed a ten-times more massive galaxy than any other found that early in the universe. He also suggested that cosmology theories are not necessarily wrong, but they might need revision to explain the fast formation and large size of these early galaxies.

Additionally, the team discovered two populations of stars within the merging galaxies. The older stars were present before the merger, while the new stars were formed due to the merging galaxies.

Dr. Boyett stated that these findings might require changes in our current models to understand the early universe better.

Vocabulary List:

1. **Astrophysics** // (noun): Branch of astronomy that deals with the physical properties and nature of celestial bodies.
2. **Merger** // (noun): The act of merging or combining things into one.
3. **Formation** // (noun): The process of being formed or created.
4. **Accumulate** // (verb): To gather or collect over time.
5. **Cosmology** // (noun): The study of the origin, evolution and eventual fate of the universe.
6. **Population** // (noun): All the inhabitants of a particular town or country.

Vocabulary quizzes

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

1. What term is used to describe an additional item that complements and enhances one's outfit or appearance?



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- Option: Jacket
Option: Accessory
Option: Shoe
Option: Jeans
2. Which field of study focuses on the origins and eventual fate of the universe?
Option: Microbiology
Option: Astronomy
Option: Cosmology
Option: Psychology
3. Which technology is designed to simulate the way a human brain operates?
Option: Neural Network
Option: Web Browser
Option: Database
Option: Operating System
4. Which term is related to money or currency?
Option: Medical
Option: Monetary
Option: Educational
Option: Environmental
5. What word describes the process of coming into being or being created?
Option: Destruction
Option: Formation
Option: Evaporation
Option: Expansion
6. What is the process of verifying the identity of a user or process?
Option: Approval
Option: Authentication
Option: Selection
Option: Rejection
7. Which term means to reconsider or reassess something?
Option: Proceed
Option: Stagnate
Option: Maintain
Option: Rethink
8. What describes an extremely strong reaction of anger shock or indignation?
Option: Joy



- Option: Outrage
- Option: Apathy
- Option: Calmness

9. Which term signifies a person's name written in a distinctive way as a form of identification?

- Option: Initial
- Option: Letter
- Option: Autograph
- Option: Signature

10. What term describes something that is essential basic or foundational?

- Option: Advanced
- Option: Insignificant
- Option: Fundamental
- Option: Optional

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

11. A _____ is the combining of two or more companies into a single entity.
12. To _____ a process means to make it happen more quickly or efficiently.
13. _____ involves examining and breaking down a complex topic or substance into its parts for closer examination.
14. _____ refers to the total number of people inhabiting a certain area or country.
15. Feeling _____ means being confused puzzled or baffled by something.
16. The newly _____ plan aims to increase efficiency in the production process.
17. A _____ is a range or series of related things or ideas.
18. _____ travel involves crossing or relating to multiple planets within a solar system.
19. _____ often offer evaluations or opinions on books movies and other forms of art.
20. The _____ of new evidence shed light on the true sequence of events.



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

21. The use of products aims to enhance or alter one's appearance.
22. Over time data will in the system requiring regular maintenance.
23. The science of delves into the properties and interactions of celestial bodies.
24. Investing in real estate can be a business if done strategically.
25. After a major renovation the old building was into a modern office space.
26. An is a set of instructions designed to perform a specific task or solve a problem.
27. The world continues to grow presenting challenges for resource management.
28. The companies announced a corporate to streamline operations and reduce costs.
29. The philosophical of dualism explores the relationship between mind and body.
30. The artist left the meaning of the painting open to personal by viewers.

Answer

Multiple Choice: 1. Accessory 2. Cosmology 3. Neural Network 4. Monetary 5. Formation 6. Authentication 7. Rethink 8. Outrage 9. Signature 10. Fundamental

Gap-Fill: 11. Merger 12. Expedite 13. Analysis 14. Population 15. Perplexed 16. Proposed 17. Spectrum 18. Interplanetary 19. Critics 20. Uncovering

Matching sentence: 1. Cosmetic 2. Accumulate 3. Astrophysics 4. Lucrative 5. Revamped 6. Algorithm 7. Population 8. Merger 9. Notion 10. Interpretation

CATEGORY

1. Sci/Tech - LEVEL3

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