



NASA Uncovers Hidden Geological Wonder in Sahara

Description

Scientists from NASA's Earth Observatory have revealed new findings about Mount Arkanu, a massive geological formation in the Sahara Desert, which has long puzzled researchers. Initially believed to be created by an ancient asteroid impact, recent studies indicate that the mountain is the result of volcanic activity over millions of years.

Mount Arkanu, located in Libya, measures approximately 15 miles across and features concentric rocky rings made of basalt and granite. The research shows that magma repeatedly intruded from below, creating these unique formations. According to scientists, these events produced overlapping rings, with their centres oriented towards the southwest. The area is also home to a distinctive "hat-shaped" structure composed of sandstone, limestone, and quartz, which further enhances the geological interest of Mount Arkanu.

In addition to its striking geology, Mount Arkanu is notable for its ancient petroglyphs, which depict animals and human figures. Discovered in 2003, these carvings suggest that the area has been significant for human activity for thousands of years, serving as a seasonal grazing ground for cattle.

Interestingly, Mount Arkanu receives slightly more rainfall than the surrounding Sahara, thanks to orographic precipitation, where moist air is lifted over mountains. This surplus supports various vegetation, creating an oasis that benefits local wildlife and herders.

The unique landscape of Mount Arkanu has historically provided shelter and resources to nomadic tribes, especially the Bedouins, who have used the site for grazing and protection from the desert's harsh conditions. This deep connection between the land's geology and local cultures continues to be significant today.

Vocabulary List:

1. **petroglyphs** //ˈpetrə,glɪfs// (noun): ancient images carved into rock surfaces
2. **intruded** //ɪnˈtruːdɪd// (verb): moved into surrounding rock from below
3. **concentric** //kənˈsentrɪk// (adjective): circles or rings sharing the same center point
4. **precipitation** //prɪ,sɪpəˈteɪʃən// (noun): water that falls from clouds as rain or snow
5. **magma** //ˈmægmə// (noun): hot melted rock below Earth's surface
6. **surplus** //ˈsɜːpləs// (noun): an amount that is more than needed



Comprehension Questions

Multiple Choice

1. What was Mount Arkanu initially believed to be the result of?
Option: Volcanic activity
Option: Erosion
Option: Ancient asteroid impact
Option: Earthquakes
2. Which country is Mount Arkanu located in?
Option: Egypt
Option: Libya
Option: Algeria
Option: Sudan
3. What materials make up the 'hat-shaped' structure of Mount Arkanu?
Option: Granite and basalt
Option: Sandstone, limestone, and quartz
Option: Basalt and granite
Option: Clay and silt
4. What year were the ancient petroglyphs discovered?
Option: 2001
Option: 2003
Option: 2005
Option: 2010
5. What type of precipitation contributes to the rainfall received by Mount Arkanu?
Option: Rain shadow effect
Option: Flooding
Option: Orographic precipitation
Option: Desert rainfall
6. Which nomadic tribes have historically utilized Mount Arkanu?
Option: Sandanistas



- Option: Bedouins
- Option: Mongols
- Option: Inuits

True-False

- 7. Mount Arkanu is solely a result of volcanic activity.
- 8. The geological formations of Mount Arkanu include concentric rocky rings.
- 9. Mount Arkanu is known for its significant rainfall compared to the surrounding Sahara.
- 10. Orographic precipitation refers to moisture that is decreased over mountains.
- 11. Ancient petroglyphs found at Mount Arkanu depict human figures only.
- 12. The Bedouins have historically used Mount Arkanu for grazing.

Gap-Fill

- 13. Mount Arkanu is located in _____.
- 14. The mountain features concentric rocky rings made of _____ and granite.
- 15. The petroglyphs discovered in 2003 depict animals and _____ figures.
- 16. Mount Arkanu is the result of volcanic activity over _____ of years.
- 17. Orographic precipitation occurs when moist air is _____ over mountains.
- 18. The landscape of Mount Arkanu has provided resources to _____ tribes.

Answer

- Multiple Choice:** 1. Ancient asteroid impact 2. Libya 3. Sandstone, limestone, and quartz 4. 2003
5. Orographic precipitation 6. Bedouins
True-False: 7. False 8. True 9. True 10. False 11. False 12. True
Gap-Fill: 13. Libya 14. basalt 15. human 16. millions 17. lifted 18. nomadic



Vocabulary quizzes

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

1. What term refers to the act of looking forward to something with excitement?

- Option: Contender
- Option: Anticipation
- Option: Resolution
- Option: Capability

2. Which of the following is a term for a competitor for a title or position?

- Option: Contender
- Option: Surplus
- Option: Axis
- Option: Rotation

3. What does it mean to have collected or gained something over a period of time?

- Option: Synchronize
- Option: Garner
- Option: Utilize
- Option: Fragmentation

4. What term describes the process of developing gradually, especially from a simple to a more complex form?

- Option: Evolving
- Option: Velocity
- Option: Magma
- Option: Spectrum

5. What is the term for a specific time or date by which something must be completed?

- Option: Deadline
- Option: Outflow
- Option: Enhancement
- Option: Petroglyph

6. What does it mean to start or begin a journey, project, or activity?

- Option: Embark
- Option: Shockwaves
- Option: Resolution
- Option: Nucleus



7. What term means to make practical and effective use of something?

- Option: Utilize
- Option: Velocity
- Option: Fragmentation
- Option: Archived

8. Which word means improved or increased?

- Option: Enhanced
- Option: Concentric
- Option: Precipitation
- Option: Shockwaves

9. What term describes the qualities or features that enable someone or something to perform a task?

- Option: Capabilities
- Option: Surplus
- Option: Magma
- Option: Jets

10. What is the term for a firm decision to do or not to do something?

- Option: Resolution
- Option: Spectrum
- Option: Concentric
- Option: Nucleus

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

11. A smartphone is a common example of a _____ device that allows users to communicate and access information.

12. Archaeologists discovered ancient _____ carved into the rocks, revealing insights into past civilizations.

13. The unexpected guest _____ on their private dinner party, causing a stir among the attendees.

14. The artist created a series of _____ circles in her painting, symbolizing unity and



harmony.

15. Rain is a form of _____ that is crucial for replenishing the earth's water supply.
16. Underneath the Earth's crust, _____ flows and can cause volcanic eruptions when it reaches the surface.
17. The company reported a significant _____ in its inventory after the holiday season.
18. The _____ of water from the reservoir was carefully monitored to maintain a stable level.
19. The steam became _____ while it traveled through the pipes, increasing in temperature as it moved.
20. The fireworks display ended with a spectacular _____ of color and light in the night sky.

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

21. Velocity is defined as the speed of something in a given direction.
22. Shockwaves are caused by rapidly moving objects, creating disturbances in the surrounding medium.
23. The project documents were archived for future reference and historical purposes.
24. The Earth's rotation on its axis leads to the cycle of day and night.
25. The analysis of data is crucial for making informed decisions and predictions.
26. Jets are streams of gas or liquid that are ejected from a source, often at high speeds.
27. The nucleus of an atom contains protons and neutrons, which are essential for its properties.
28. Fragmentation occurs when an object breaks apart into smaller pieces, often due to stress or impact.
29. Species are constantly evolving, adapting to changes in their environment over time.



30. The new software enhanced the capabilities of the existing system, allowing for improved performance.

Answer

Multiple Choice: 1. Anticipation 2. Contender 3. Garner 4. Evolving 5. Deadline 6. Embark 7. Utilize 8. Enhanced 9. Capabilities 10. Resolution

Gap-Fill: 11. handheld 12. petroglyphs 13. intruded 14. concentric 15. precipitation 16. magma 17. surplus 18. outflow 19. superheated 20. starburst

Matching sentence: 1. velocity 2. shockwaves 3. archived 4. rotation 5. analysis 6. jets 7. nucleus 8. fragmentation 9. evolving 10. capabilities

CATEGORY

1. Sci/Tech - LEVEL4

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