



Massive 'God of Darkness' Asteroid Faces Earthly Danger

Description

There is an asteroid named [Apophis](#). It is named after an ancient Egyptian god. This asteroid does not pose a threat to Earth, but Earth can change it.

In 2029, Apophis will fly close to Earth. Scientists believe that this close pass will change its surface. Ronald Ballouz, a scientist at Johns Hopkins University, studied this. He thinks this can explain why some asteroids look younger than expected.

Apophis is about 335 meters long. When it was discovered in 2004, scientists worried it might hit Earth. But now, they know it will pass safely. In 2029, Apophis will be less than [32,000 kilometers](#) away—about 20,000 miles.

As it passes, its surface might shake. This shaking could change how it looks over time. We are excited to see Apophis as it comes close. It will be bright enough to see without a telescope.

The research results are in *The Planetary Science Journal* and available on [arXiv](#).

Vocabulary List:

1. **Asteroid** /'æstə,rɔɪd/ (noun): A small rocky body orbiting the sun mainly found in the asteroid belt between Mars and Jupiter.
2. **Surface** /'sɜ:rfɪs/ (noun): The outermost layer or boundary of an object.
3. **Change** /tʃeɪndʒ/ (verb): To make something different from what it is or from what it would be if left alone.
4. **Pass** /pæs/ (verb): To move past or go by something.
5. **Shake** /ʃeɪk/ (verb): To move or cause to move back and forth or up and down with quick movements.
6. **Bright** /braɪt/ (adjective): Emitting or reflecting much light; vivid or colorful.

Comprehension Questions

Multiple Choice

1. What is the name of the asteroid mentioned in the text?

Option: Apophis



- Option: Apep
- Option: Aphrodite
- Option: Amun

2. Where did scientists discover Apophis?

- Option: 2004
- Option: 2010
- Option: 2029
- Option: 2015

3. Who studied the potential surface changes of Apophis during its close pass in 2029?

- Option: Ronald Ballouz
- Option: John Smith
- Option: Emily White
- Option: David Johnson

4. How long is Apophis estimated to be?

- Option: 335 meters
- Option: 500 meters
- Option: 200 meters
- Option: 700 meters

5. Where will Apophis be in 2029 in relation to Earth?

- Option: Less than 32,000 kilometers away
- Option: Less than 50,000 kilometers away
- Option: Less than 10,000 kilometers away
- Option: Over 100,000 kilometers away

6. Where are the research results about Apophis published?

- Option: The Planetary Science Journal
- Option: Nature
- Option: Science Daily
- Option: Astronomy Now

True-False

7. Apophis poses a threat to Earth.



8. Scientists initially believed Apophis might hit Earth.
9. Apophis will be visible without a telescope in 2029.
10. The close pass of Apophis in 2029 will not impact its surface.
11. The surface shaking of Apophis could change its appearance over time.
12. Ronald Ballouz is affiliated with Harvard University.

Gap-Fill

13. Apophis will pass Earth at a distance of less than _____ kilometers in 2029.
14. The asteroid Apophis was discovered in the year _____ .
15. The research on Apophis is available on _____ .
16. Ronald Ballouz is a scientist at Johns Hopkins University and studied the potential surface changes of Apophis during its close pass in _____ .
17. Apophis is named after an ancient Egyptian _____ .
18. The estimated length of asteroid Apophis is about 335 _____ .

Answer

Multiple Choice: 1. Apophis 2. 2004 3. Ronald Ballouz 4. 335 meters 5. Less than 32,000 kilometers away 6. The Planetary Science Journal

True-False: 7. False 8. True 9. True 10. False 11. True 12. False

Gap-Fill: 13. 32,000 14. 2004 15. arXiv 16. 2029 17. god 18. meters

Vocabulary quizzes

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



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1. What term describes a decrease or reduction in something?
Option: Triplet
Option: Quadruplet
Option: Decline
Option: Embryo
 2. What term refers to the ability to conceive children or young?
Option: Shadow
Option: Fertility
Option: Laser
Option: Interact
 3. What term refers to the application of scientific knowledge for practical purposes?
Option: Material
Option: Discovery
Option: Technology
Option: Asteroid
 4. Which word indicates making something different or altering it?
Option: Surface
Option: Change
Option: Pass
Option: Shake
 5. What word is used to describe something shining or full of light?
Option: Bright
Option: Autistic
Option: Diagnosed
Option: Career
 6. Which term means to keep something in a good condition or preserve it?
Option: Understand
Option: People
Option: Group
Option: Maintain
 7. What unit of energy is commonly used to measure the energy content of food?
Option: Calories
Option: Metabolic
Option: Expenditure
Option: Adjust



8. Which term describes the accomplishment of an aim or purpose?

- Option: Maintain
- Option: Success
- Option: Autistic
- Option: Decline

9. What word refers to a collection of individuals who come together?

- Option: Change
- Option: Group
- Option: Calories
- Option: Shadow

10. Which term means to communicate or work together with someone or something?

- Option: Bright
- Option: Interact
- Option: Technology
- Option: Fertility

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

11. The _____ used in the construction of the building was of high quality.

12. Regular exercise can help boost your _____ rate.

13. The scientist made an important _____ that changed the field of physics.

14. When nervous some people tend to _____ their hands.

15. The child was _____ at an early age.

16. The doctor provided some helpful _____ for leading a healthier lifestyle.

17. It is important to _____ your sails to catch the wind properly while sailing.

18. I could see the train _____ by as I waited on the platform.

19. During the early stages of pregnancy the developing baby is called an _____.

20. The tree cast a long _____ across the lawn in the evening sun.



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

21. Doctors used a focused beam of light to perform eye surgery.
22. Space scientists study rocks orbiting the sun that are smaller than planets.
23. After the assessment the nutritionist provided suggestions for a balanced diet plan.
24. She gave birth to three babies at the same time.
25. The top layer of the earth is known as the crust.
26. She has been working as a lawyer for the past ten years.
27. The doctor determined the illness after a series of tests.
28. There is a diverse group of individuals living in the neighborhood.
29. The company carefully tracks its financial spending to stay within budget.
30. The object blocked the light creating a dark area behind it.

Answer

Multiple Choice: 1. Decline 2. Fertility 3. Technology 4. Change 5. Bright 6. Maintain 7. Calories 8. Success 9. Group 10. Interact

Gap-Fill: 11. Material 12. Metabolic 13. Discovery 14. Shake 15. Autistic 16. Recommendations 17. Adjust 18. Pass 19. Embryo 20. Shadow

Matching sentence: 1. Laser 2. Asteroid 3. Recommendations 4. Triplet 5. Surface 6. Career 7. Diagnosed 8. People 9. Expenditure 10. Shadow

CATEGORY

1. Health - LEVEL1

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