



# New Earth-sized Exoplanet Found Orbiting Long-Lived Star

## Description

Researchers using global robotic telescopes have made a groundbreaking discovery - the detection of an Earth-sized planet, SPECULOOS-3 b, orbiting an ultra-cool red dwarf within the Milky Way galaxy. This planet, despite being tidally locked and possibly lacking an atmosphere due to intense radiation, offers valuable insights into long-lived red dwarfs. These stars, which make up more than 70% of the stars in our galaxy, have a lifespan of over 100 billion years, providing a potentially hospitable environment for life to develop.

The discovery of SPECULOOS-3 b, located just 55 light-years away from Earth, offers intriguing details. It is about the same size as Earth and completes one orbit around its star in just 17 hours, suggesting a perpetually lighted dayside and a perpetually dark nightside. The planet's star, thousands of degrees cooler than the Sun, bombards the planet with radiation, hinting at the absence of an atmosphere.

SPECULOOS-3 b presents an exciting opportunity for further observation by the James Webb Space Telescope, as scientists aim to explore the potential habitability of this Earth-sized exoplanet orbiting a unique ultra-cool red dwarf star.

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## Vocabulary List:

1. **Robotic** // (adjective): Relating to or characteristic of robots.
2. **Detection** // (noun): The action or process of identifying the presence of something.
3. **Tidally** // (adverb): Relating to or affected by tides.
4. **Hospitable** // (adjective): Friendly and welcoming to guests or strangers.
5. **Perpetually** // (adverb): Continuing or enduring forever.
6. **Exoplanet** // (noun): A planet that orbits a star outside the solar system.

## Vocabulary quizzes

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

1. What is the opposite of "accidental"?  
Option: Intentional  
Option: Rare  
Option: Unplanned  
Option: Unexpected
2. Which term best describes a group representing the smallest part of a population?  
Option: Majority  
Option: Equality  
Option: Plurality  
Option: Commonality
3. Which word means "limited to only one person or group"?  
Option: Inclusive  
Option: Shared  
Option: Exclusive  
Option: Restricted
4. What term describes an environment where multiple entities vie for the same resources or dominance?  
Option: Collaborative  
Option: Unchallenging  
Option: Passive  
Option: Aggressive
5. Which term relates to the moon's influence on Earth's tides?



- Option: Sporadically
- Option: Periodically
- Option: Regularly
- Option: Reluctantly

6. What term means something that is continuous or never-ending?

- Option: Temporarily
- Option: Occasionally
- Option: Intermittently
- Option: Eternally

7. Which term is used to describe the process of obtaining or gaining ownership or control over something?

- Option: Loss
- Option: Donation
- Option: Renovation
- Option: Ownership

8. Which term refers to a range of skills or abilities to accomplish something?

- Option: Weaknesses
- Option: Liabilities
- Option: Incompetence
- Option: Strengths

9. What is the term that means developing or changing gradually over time?

- Option: Static
- Option: Regressing
- Option: Stagnant
- Option: Maturing

10. Which term signifies a change from one condition or state to another?

- Option: Stability
- Option: Consistency
- Option: Uniformity
- Option: Change

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

11. The police are \_\_\_\_\_ on illegal activities in the area.

12. The movie premiere is highly \_\_\_\_\_ by fans worldwide.



13. The locals in that village are known for their \_\_\_\_\_ nature towards visitors.
14. The \_\_\_\_\_ arm assisted surgeons during the delicate procedure.
15. The early \_\_\_\_\_ of the issue prevented a major crisis.
16. The team is \_\_\_\_\_ for the upcoming competition with intense training sessions.
17. After completing the course you will be able to \_\_\_\_\_ your skills with a valid certificate.
18. The stock market was volatile due to numerous \_\_\_\_\_ about the economy.
19. The exclusive club hosted an \_\_\_\_\_ event for its distinguished members.
20. Due to player feedback the game developer implemented several \_\_\_\_\_ to balance gameplay.

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



21. The scientist studied the natural for years before publishing his findings.
22. Graduating from college was a significant in her academic journey.
23. Parents should not their children from pursuing their dreams.
24. All passengers must be before the ship departs.
25. The teacher asked the students to their understanding of the topic through a presentation.
26. The team displayed a remarkable level of throughout the entire season.
27. The automated vacuum cleaner moved with precision around the room.
28. Developing countries often struggle with inadequate for basic services.
29. Astronomers discovered an orbiting a distant star.
30. The company adopted cloud to optimize its IT resources.

## Answer

**Multiple Choice:** 1. Intentional 2. Majority 3. Restricted 4. Aggressive 5. Periodically 6. Eternally 7. Ownership 8. Strengths 9. Maturing 10. Change

**Gap-Fill:** 11. Cracking down 12. Anticipated 13. Hospitable 14. Robotic 15. Detection 16. Gearing up 17. Certify 18. Speculations 19. Invitational 20. Nerfs

**Matching sentence:** 1. Phenomenon 2. Milestone 3. Discourage 4. Aboard 5. Demonstrate 6. Dominance 7. Robotic 8. Infrastructure 9. Exoplanet 10. Virtualization

## CATEGORY

1. Sci/Tech - LEVEL3

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