



NASA Finds International Space Station Too Sterile.

Description

Astronauts have long grappled with skin irritations and immune system challenges while orbiting above Earth. Recent research published in the prestigious journal *Cell* has suggested that the hyper-sanitized environment of a spacecraft may contribute to these issues.

Scientists at the University of California, San Diego, scrutinized the International Space Station (ISS) carefully. They found that the station lacked the diverse array of natural microbes that humans typically encounter on Earth. The overuse of disinfectants appeared to be correlated with the reduced microbiome diversity on the space station.

This depletion of natural bacteria on the ISS is concerning, as it may impact the astronauts' immune systems. The presence of fewer microbial species on the station compared to Earth-based buildings has prompted researchers to advocate for intentionally fostering more diverse microbial communities in built environments.

Moving forward, scientists are exploring the potential benefits of introducing certain environmental organisms into spacecraft to aid astronauts in combating skin irritations and inflammation. This approach could be beneficial not only in space settings but also on Earth in buildings, hospitals, and other sterile environments.

The concept of balancing microbial diversity in closed environments is gaining traction, with the idea of incorporating "green zones" or living walls in future spacecraft to introduce healthy microbes while keeping pathogens at bay. This shift from a strict "kill everything" approach to a more nuanced microbial management strategy holds promise for creating healthier and more balanced environments, both in space and on Earth.

Vocabulary List:

1. **Irritations** /ˌɪrəˈteɪʃən/ (noun): The state of feeling annoyed upset or exasperated.
2. **Microbiome** /ˌmaɪ.kroʊˈbaɪ.əsm/ (noun): The collection of microorganisms living in a particular environment such as the body.
3. **Depletion** /dɪˈpliːʃən/ (noun): The reduction in the number or quantity of something.
4. **Scrutinized** /ˈskruː.tɪ.naɪz/ (verb): To examine carefully and critically.
5. **Fostering** /ˈfɔː.stər.ɪŋ/ (verb): Encouraging the development or growth of something.
6. **Pathogens** /ˈpæθ.ə.dʒənz/ (noun): Microorganisms that can cause disease.



Vocabulary quizzes

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

1. Which term refers to the act of showing how to do something?
Option: Integration
Option: Demonstration
Option: Capabilities
Option: Interaction
2. What is the term for the collection of microorganisms in a particular environment?
Option: Intriguing
Option: Microbiome
Option: Vintage
Option: Amalgamated
3. Which word means to be anxious or unsettled?
Option: Intricate
Option: Diverging
Option: Perturbed
Option: Amalgamated
4. What term describes something done with speed and efficiency?
Option: Conundrum
Option: Nascent
Option: Proffer
Option: Expeditious
5. What term describes a significant change in form or appearance?
Option: Advancement
Option: Transformative
Option: Dwindling
Option: Sagacious
6. Which term refers to the reduction or exhaustion of something?
Option: Depletion
Option: Vintage
Option: Ampules
Option: Electric
7. What is a term that describes something classic or of high quality from the past?



- Option: Diverging
- Option: Vintage
- Option: Intricate
- Option: Fostering

8. Which term refers to one's possessions or personal effects?

- Option: Conundrum
- Option: Belongings
- Option: Intricate
- Option: Amalgamated

9. Which term denotes reciprocal action or influence between two or more entities?

- Option: Capabilities
- Option: Interactions
- Option: Realism
- Option: Advancement

10. What term describes things that cause annoyance or agitation?

- Option: Irritations
- Option: Microbiome
- Option: Depletion
- Option: Scrutinized

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

11. The _____ design of the watch impressed the expert craftsmen.
12. The new company is an _____ entity formed by the merger of two established firms.
13. Doctors are concerned about the spread of harmful _____ in the hospital.
14. The _____ advice of the old wise man saved the village from disaster.
15. Technological _____ has revolutionized the way we communicate.
16. Scientists can _____ future trends based on the data collected over the past decade.
17. Solving the _____ of the missing funds required a team of forensic accountants.
18. The _____ stage of the project required careful planning and execution.



19. The resources of the remote village were _____ due to the prolonged drought.
20. The organization is dedicated to _____ a sense of community among its members.

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

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| 21. Effective communication enhances the between team members. |
| 22. The film aimed for a gritty that portrayed the harsh realities of urban life. |
| 23. The new software has advanced features that enhance the user's . |
| 24. The teacher provided a clear of the scientific experiment to the class. |
| 25. Medical has led to breakthrough treatments for previously incurable diseases. |
| 26. The financial reports were carefully to identify any discrepancies. |
| 27. The rapid of natural resources is a major concern for environmentalists. |
| 28. Common skin include redness itching and inflammation. |
| 29. The plot twists in the movie kept the audience guessing until the end. |
| 30. The new education policy aims to bring about changes in the way students learn. |

Answer

Multiple Choice: 1. Demonstration 2. Microbiome 3. Perturbed 4. Expeditious 5. Transformative 6. Depletion 7. Vintage 8. Belongings 9. Interactions 10. Irritations

Gap-Fill: 11. intricate 12. amalgamated 13. pathogens 14. sagacious 15. advancement 16. extrapolate 17. conundrum 18. nascent 19. dwindling 20. fostering

Matching sentence: 1. interaction 2. realism 3. capabilities 4. demonstration 5. advancement 6. scrutinized 7. depletion 8. irritations 9. intriguing 10. transformative

CATEGORY

1. Sci/Tech - LEVEL6

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Author

aimeeyoung99