



Centuries-Long Pause Reveals Life-Forms' Surprising Benefits: Science Breakthrough!

Description

Plants and animals can survive harsh conditions by moving, adapting, or entering a dormant state.

Dormancy helps organisms escape tough seasons by slowing down their activity until conditions improve.

In a recent study, researchers discovered that dormancy can help different species survive together when environments change.

What is dormancy?

Many organisms, like bears and plants, use dormancy to survive difficult times.

Some organisms remain inactive for centuries or even thousands of years.

We focused on diapause, a type of dormancy in animals where they slow down their activity to resist changes in the environment.

Does dormancy help species survive?

In our experiment with nematode worms, we found that species more inclined to dormancy can coexist with competitors in different environments.

Species that invest in dormancy can survive better in changing climates, making them more resilient.

We will continue studying dormancy in plants, animals, and microbes to understand its role in the real world.

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Vocabulary List:

1. **Dormancy** /'dɔːr.mən.si/ (noun): A state of inactivity or reduced metabolic activity in organisms allowing them to survive unfavorable conditions.
2. **Adapt** /ə'dæpt/ (verb): To adjust or modify behavior or characteristics to better fit a particular environment or situation.
3. **Survive** /sər'vaɪv/ (verb): To continue to live or exist especially in spite of danger or hardship.



4. **Resist** /rɪ'zɪst/ (verb): To withstand the force or effect of something such as environmental changes.
5. **Coexist** /ˌkoʊ.ɪg'zɪst/ (verb): To exist together in the same time or space often despite differences or competition.
6. **Resilient** /rɪ'zɪl.jənt/ (adjective): Able to recover quickly from difficulties or adapt well to change.

Comprehension Questions

Multiple Choice

1. How do plants and animals survive harsh conditions?
Option: By moving
Option: By adapting
Option: By entering a dormant state
Option: All of the above
2. Which of the following is NOT a way organisms escape tough seasons?
Option: Moving
Option: Adapting
Option: Eating
Option: Entering a dormant state
3. What type of dormancy was focused on in the text?
Option: Hibernation
Option: Diapause
Option: Aestivation
Option: Estivation
4. What did researchers discover about dormancy in the recent study?
Option: It only helps individual species survive
Option: It has no impact on survival in changing environments
Option: It can help different species survive together when environments change
Option: It is ineffective in harsh conditions
5. What does dormancy help species do in changing climates?
Option: Struggle to survive
Option: Lose resilience
Option: Survive better
Option: Adapt quickly



6. Who is studying dormancy in plants, animals, and microbes?

Option: Natalie Jones

Option: The research team at Griffith University

Option: No one is studying it

Option: Multiple research teams worldwide

True-False

7. Dormancy can help organisms survive tough seasons.

8. Dormancy is only effective for individual species survival.

9. The study focused on dormancy in plants only.

10. Dormancy makes species less resilient in changing climates.

11. Species more inclined to dormancy can coexist with competitors in different environments.

12. Dormancy is not beneficial for the survival of different species.

13. Dormancy helps organisms escape tough seasons by slowing down their activity until conditions improve.

14. In a recent study, researchers discovered that dormancy can help different species survive together when environments change.

Gap-Fill

15. Dormancy can help species survive better in changing climates, making them more

_____.

16. Diapause is a type of dormancy in animals where they slow down their activity to resist changes in the

_____.



17. Researchers will continue studying dormancy in plants, animals, and _____
to understand its role.

18. Dormancy is a strategy used by many organisms, like bears and _____, to survive
difficult times.

Answer

Multiple Choice: 1. All of the above 2. Eating 3. Diapause 4. It can help different species survive together when environments change 5. Survive better 6. Natalie Jones

True-False: 7. True 8. False 9. False 10. False 11. True 12. False 13. False 14. False

Gap-Fill: 15. resilient 16. environment 17. microbes 18. plants

Vocabulary quizzes

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

1. What drives progress in various fields and industries?

Option: Dormancy

Option: Advancements

Option: Technology

Option: Ancestors

2. Who studies the properties and interactions of matter and energy?

Option: Memory

Option: Researchers

Option: Physicists

Option: Particles

3. Which disease affects the central nervous system and can cause tremors and difficulty with movement?

Option: Resist

Option: Dementia

Option: Parkinson

Option: Inflammation

4. What are the elementary particles that combine to form protons and neutrons?

Option: Gluons



- Option: Quarks
- Option: Neutrons
- Option: Particles

5. What branch of physics deals with the behavior of very small particles like photons and electrons?

- Option: Visceral
- Option: Active
- Option: Quantum
- Option: Subcutaneous

6. Which B vitamin is essential for converting food into energy?

- Option: Toxins
- Option: Biotin
- Option: Riboflavin
- Option: Memory

7. In what way do different species live together without causing harm to each other?

- Option: Resilient
- Option: Survive
- Option: Resist
- Option: Coexist

8. Who conducts systematic investigations to establish facts or reach new conclusions?

- Option: Memory
- Option: Active
- Option: Quantum
- Option: Researchers

9. What term is used to describe finding or learning something previously unknown or unseen?

- Option: Similar
- Option: Discovery
- Option: Planned
- Option: Ancestors

10. What is the ability of an organism to adjust to its environment for survival?

- Option: Adapt
- Option: Particles
- Option: Gluons
- Option: Quarks

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



11. In biology organisms that share _____ characteristics are often classified together.
12. Alzheimer's disease is associated with a decline in cognitive function and _____ loss.
13. Genetic traits are passed down from our _____ and can influence our physical appearance.
14. Organisms with advantageous traits are more likely to _____ and reproduce in a given environment.
15. Regular physical exercise helps to keep the body _____ and healthy.
16. Exposure to environmental pollutants and harmful substances can lead to the accumulation of _____ in the body.
17. Chronic _____ in the body can contribute to the development of various diseases.
18. Older adults may experience cognitive decline and memory loss as a result of _____.
19. The construction of a new city is a complex project that requires careful _____ and execution.
20. Antibiotics are used to help the body _____ bacterial infections.

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

21. Subatomic particles found in the nucleus of an atom along with protons.
22. Fundamental units of matter that make up the universe and interact through forces.
23. Quantum particles that mediate the strong force which holds quarks together.
24. The ability to recover from difficulties and maintain stability and adaptability.
25. Located or placed just beneath the skin such as a subcutaneous injection.
26. Connect or associate one thing with another due to a relationship or connection.



27. A B vitamin that plays a key role in metabolism and energy production.
28. A state of minimal activity or reduced metabolic rate often to survive harsh conditions.
29. Technological and scientific progress leading to new innovations and discoveries.
30. Past generations from which individuals or species are descended.

Answer

Multiple Choice: 1. Advancements 2. Physicists 3. Parkinson 4. Quarks 5. Quantum 6. Riboflavin 7. Coexist 8. Researchers 9. Discovery 10. Adapt

Gap-Fill: 11. Similar 12. Memory 13. Ancestors 14. Survive 15. Active 16. Toxins 17. Inflammation 18. Dementia 19. Planned 20. Resist

Matching sentence: 1. Neutrons 2. Particles 3. Gluons 4. Resilient 5. Subcutaneous 6. Linked 7. Biotin 8. Dormancy 9. Advancements 10. Ancestors

CATEGORY

1. Health - LEVEL2

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