



Frogs Defy Gravity: The Science Behind Their Water-Walking Skills

Description

Some frogs can move on the surface of water like they are on land. They use a funny method to do this.

Instead of hopping like a [skipped stone](#), these frogs make belly flops into the water. They sink a little, then push up quickly before going under. It is a surprising way to go from one place to another.

"Skittering" is a word used for this behavior. In 1949, a naturalist used it to describe how frogs move on water. Now, many scientists use this word, too," says Talia Weiss, an engineer from Virginia Tech.

"We want to study this movement in cricket frogs and define 'skittering' better."

The northern cricket frog ([Acris crepitans](#)) can do this. Researchers used high-speed cameras to see how these frogs jump on land and water.

When they jump, the frogs briefly go under the water. This movement is like how dolphins jump. The frogs seem to skip but are actually doing multiple jumps.

More research may help us learn why only some frogs move this way.

Vocabulary List:

1. **Skittering** /'skɪtə.rɪŋ/ (noun): A rapid light movement often skimming over a surface.
2. **Naturalist** /'nætʃ.ər.əl.ɪst/ (noun): A person who studies or is an expert in natural history especially a biologist.
3. **Movement** /'mu:v.mənt/ (noun): An act of changing physical location or position.
4. **Researchers** /rɪ'sɜ:r.tʃərz/ (noun): People who conduct studies to discover new information.
5. **Behavior** /bɪ'heɪ.vjər/ (noun): The way in which one acts or conducts oneself especially towards others.
6. **Surprising** /sər'praɪ.zɪŋ/ (adjective): Causing a feeling of wonder or astonishment.

Comprehension Questions

Multiple Choice

1. What term is used to describe how some frogs move on the surface of water?

Option: Hopping



- Option: Walking
- Option: Skittering
- Option: Swimming

2. Which frog behavior involves making belly flops into the water and pushing up quickly?

- Option: Jumping
- Option: Skipping
- Option: Hopping
- Option: Skittering

3. What did researchers use to observe how the northern cricket frogs move on land and water?

- Option: Infrared cameras
- Option: High-speed cameras
- Option: Underwater microphones
- Option: Satellite imagery

4. What is another animal mentioned that moves similarly to how the northern cricket frogs move?

- Option: Birds
- Option: Dolphins
- Option: Cats
- Option: Snakes

5. What word did a naturalist use in 1949 to describe frog movement on water?

- Option: Swimming
- Option: Skittering
- Option: Diving
- Option: Skipping

6. What do some frogs seem to be doing when moving on the surface of water?

- Option: Walking
- Option: Skipping
- Option: Floating
- Option: Multiple jumps

True-False

7. Frogs that exhibit skittering behavior do not touch the surface of the water.



8. Talia Weiss is a naturalist who first used the term "skittering" to describe frog movement on water.
9. The behavior of skittering in frogs involves quickly going under the water and resurfacing.
10. Researchers are not interested in studying the movement of cricket frogs.
11. Cricket frogs move on water by walking on the surface like other amphibians.
12. The term "skittering" is used by scientists to describe how frogs move on water.

Gap-Fill

13. The term "skittering" was first used in 1949 by a _____ to describe how frogs move on water.
14. Researchers used high-speed cameras to observe how the northern cricket frogs move on land and water, and this movement is similar to how _____ jump.
15. More research may help us learn why only some frogs exhibit this unique way of moving on the surface of water from one place to _____.
16. The unusual behavior of skittering in frogs involves making belly flops into the water, sinking a little, then pushing up quickly before going _____.
17. The northern cricket frog is known scientifically as Acris _____.
18. The term "skittering" is used to describe the movement of frogs on _____ like they are on land.

Answer

Multiple Choice: 1. Skittering 3. High-speed cameras 4. Dolphins 6. Multiple jumps

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

Gap-Fill: 13. naturalist 14. dolphins 15. another 16. under 17. crepitans 18. water



Vocabulary quizzes

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

1. What is a meteorite?
Option: A type of comet
Option: A piece of rock from space that has landed on Earth
Option: A shooting star
Option: An artificial satellite
2. What does the field of psychology study in relation to individuals?
Option: Weather patterns
Option: Animal habits
Option: College tuition fees
Option: Behavior and mental processes
3. What type of beverage is ethanol?
Option: Milk
Option: Water
Option: Alcohol
Option: Soda
4. What term is used to describe the change in position of an object over time?
Option: Motion
Option: Rest
Option: Stasis
Option: Inactivity
5. What is the average weather condition in a specific area over a long period of time?
Option: Temperature
Option: Season
Option: Climate
Option: Forecast
6. What is the natural process of becoming older?
Option: Growing
Option: Ageing
Option: Youthening
Option: Immortality
7. What is the probability of harm or damage?



- Option: Entropy
- Option: Safety
- Option: Risk
- Option: Risk Diminishment

8. What is the organized provision of medical care to individuals or a community?

- Option: Veterinary care
- Option: Dental care
- Option: Aesthetic care
- Option: Healthcare

9. What are advantages or rewards from a particular action or situation?

- Option: Obstacles
- Option: Drawbacks
- Option: Benefits
- Option: Hindrances

10. Which term best describes someone who is full of energy and enthusiasm?

- Option: Lethargic
- Option: Energetic
- Option: Apathetic
- Option: Torpid

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

11. After the explosion the area was littered with _____.

12. _____ is a general term for a decline in mental ability severe enough to interfere with daily life.

13. The number of people living in a particular area is known as the _____.

14. The best part of the concert was definitely the _____ of the lead singer's vocal range.

15. It is important to have proper _____ of your emotions in stressful situations.

16. Putting aside some money each month is a good way to build up your _____.

17. Cow flatulence is a significant source of _____ emissions.



18. The data was thoroughly _____ by the research team.
19. The hikers found themselves _____ in the cave due to the sudden rockfall.
20. _____ are a major concern during hot and dry seasons in forested regions.

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

21. The asteroid had a significant impact on the Earth's ecosystem millions of years ago.
22. The large hole in the ground was caused by a meteorite impact and is known as a crater.
23. The sudden appearance of the rare bird species in the city park was quite surprising to the birdwatchers.
24. Overcoming the obstacles in the mountain terrain proved to be a tough challenge for the climbers.
25. The sound of the mouse skittering across the attic floor startled the homeowner.
26. The biologist specialized in studying insect behavior in their natural habitats.
27. The team of researchers conducted experiments to test the new drug's efficacy.
28. Despite his fame he preferred to live an ordinary life away from the spotlight.
29. The chef's special dish was the highlight of the evening at the gourmet festival.
30. Scientists use isotopes to determine the age of ancient artifacts through radiocarbon dating.

Answer

Multiple Choice: 1. A piece of rock from space that has landed on Earth 2. Behavior and mental processes 3. Alcohol 4. Motion 5. Climate 6. Ageing 7. Risk 8. Healthcare 9. Benefits 10. Energetic

Gap-Fill: 11. debris 12. Dementia 13. population 14. highlight 15. control 16. savings 17. methane 18. analyzed 19. trapped 20. Wildfires

Matching sentence: 1. Impact 2. Crater 3. Surprising 4. Challenge 5. Skittering 6. Naturalist 7. Researchers 8. Ordinary 9. Highlight 10. Isotopes

CATEGORY

1. Health - LEVEL1

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