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# Blue Ghost Snags Breathtaking Moon Footage Before Historic Landing

## Description

As it positions itself for a landing attempt, Firefly Aerospace's Blue Ghost lander has successfully captured stunning footage of the Moon receding beneath it. The video, which has been accelerated by a factor of ten, was recorded approximately 100 kilometers (0.62 miles) above the lunar surface, providing a glimpse of the Moon's far side along with an aerial perspective of Blue Ghost's Reaction Control System (RCS) thrusters at its center and radiator panels flanking either side.

The Texas-based aerospace company elucidated in its live blog, "The radiator panels are functioning nominally to safeguard Blue Ghost's subsystems from the severe thermal conditions encountered in space."

The lander is equipped with ten scientific instruments developed for NASA, which will conduct measurements in Mare Crisium, a substantial basalt-filled impact basin located on the lunar near side. This mission marks the inaugural installment of three collaborative endeavors between Firefly Aerospace and NASA.

The subsequent mission, slated for 2026, aims to place a lander on the Moon's far side, while the third mission in 2028 will deploy a rover to investigate the enigmatic Gruithuisen Domes on the near side. Together, these missions are expected to yield vital data, assisting NASA in evaluating the potential for long-term lunar habitation and the establishment of a permanent base on the Moon.

The Blue Ghost lander is set to initiate its descent into Mare Crisium on March 2, an event that is highly anticipated.

Despite advancements in technology, landing on the Moon remains an exceptionally challenging endeavor, as the lack of atmosphere provides no natural drag to aid the descent, compelling reliance on thrusters alone. As such, the terrain's ruggedness presents narrow margins for safe landing.

If all goes according to plan, the lander will utilize its scientific payload for an entire lunar day—equivalent to 14 Earth days—capturing images of a solar eclipse as Earth transpires before the Sun and a lunar sunset. It is expected to continue functioning for several hours into the lunar night before ceasing operations, facing the daunting cold of lunar temperatures that plummet below -246 degrees Celsius (-410 degrees Fahrenheit). All eyes will be on the spacecraft as it endeavors to achieve a successful landing; stay tuned to the [mission blog](#) for the latest updates.

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## Vocabulary List:

1. **Elucidated** /ɪˈluː.sɪ.deɪtɪd/ (verb): Made something clear; explained.
2. **Nominally** /ˈnɒm.i.nəl.i/ (adverb): In name only; officially.
3. **Enigmatic** /,ɛnɪg'mætɪk/ (adjective): Difficult to interpret or understand; mysterious.



4. **Habitation** /,hæbrɪ'teɪʃən/ (noun): The act of living in or occupying a place.
5. **Daunting** /'dɔːntɪŋ/ (adjective): Seeming difficult to deal with; intimidating.
6. **Thermal** /'θɜːr.məl/ (adjective): Relating to heat or temperature.

## Comprehension Questions

### Multiple Choice

1. What has Firefly Aerospace's Blue Ghost lander captured footage of?  
Option: Mars surface  
Option: Moon receding beneath it  
Option: Saturn rings  
Option: Earth from space
2. At what altitude was the footage recorded?  
Option: 50 kilometers  
Option: 150 kilometers  
Option: 100 kilometers  
Option: 200 kilometers
3. What task do the radiator panels of the Blue Ghost lander perform?  
Option: Protect from space debris  
Option: Generate solar energy  
Option: Safeguard subsystems from thermal conditions  
Option: Aid in landing
4. How many scientific instruments is the lander equipped with for NASA missions?  
Option: 5  
Option: 8  
Option: 10  
Option: 12
5. What is the primary focus of the subsequent mission in 2026?  
Option: Investigate Gruithuisen Domes  
Option: Deploy rover on the Moon's near side  
Option: Explore Mare Crisium  
Option: Land on the far side of the Moon



6. Why is landing on the Moon challenging according to the text?

- Option: Heavy gravitational pull
- Option: Lack of atmosphere and natural drag
- Option: Strong magnetic interference
- Option: Extreme cold temperatures

**True-False**

7. The Blue Ghost lander is scheduled to descend into Mare Crisium on March 2.

8. The third mission with NASA in 2028 will investigate the Moon's far side.

9. The ultimate aim of the NASA and Firefly Aerospace missions is to evaluate long-term habitability of the Moon.

10. The lack of atmosphere on the Moon provides natural drag beneficial for landing.

11. The Blue Ghost lander will capture images of a solar eclipse as the Moon transpires before the Sun.

12. The lander is expected to function throughout the lunar night as well.

**Gap-Fill**

13. What is the altitude from which the footage was recorded, approximately 100 \_\_\_\_\_ above the lunar surface?

14. The Blue Ghost lander is equipped with ten scientific instruments developed for \_\_\_\_\_ missions.

15. The mission in 2028 will deploy a rover to investigate the enigmatic Gruithuisen Domes on the Moon's near \_\_\_\_\_.

16. If successful, the lander will capture images of a solar eclipse as Earth transpires before the \_\_\_\_\_.

17. The Blue Ghost lander will cease operations facing the daunting cold of lunar temperatures that



plummet below -246 degrees Celsius (-410 degrees \_\_\_\_\_).

18. The text mentions that lack of atmosphere on the Moon presents challenges due to no natural drag to aid the \_\_\_\_\_.

## Answer

**Multiple Choice:** 1. Moon receding beneath it 2. 100 kilometers 3. Safeguard subsystems from thermal conditions 4. 10 5. Land on the far side of the Moon 6. Lack of atmosphere and natural drag

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

**Gap-Fill:** 13. kilometers 14. NASA 15. side 16. Sun 17. Fahrenheit 18. descent

## Vocabulary quizzes

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

1. What is the term used to describe a situation where pests overrun an area?

Option: Propagation

Option: Infestation

Option: Resilient

Option: Daunting

2. Which term refers to the act of persisting in a task or belief despite obstacles?

Option: Impact

Option: Perseverance

Option: Achievement

Option: Transmission

3. What word means to make something clear or explain?

Option: Collision

Option: Elucidated

Option: Efficacy

Option: Nominally

4. What term is used to describe the act of breeding multiplying or spreading?

Option: Trajectory

Option: Collaborative

Option: Propagate



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Option: Thermal

5. Which term describes something mysterious puzzling or difficult to understand?

- Option: Mutation
- Option: Enigmatic
- Option: Mitigating
- Option: Challenges

6. What is a viral infection that causes fever cough and muscle aches?

- Option: Epidemic
- Option: Influenza
- Option: Habitation
- Option: Sustainable

7. What term is used to describe the effect or influence of one thing on another?

- Option: Efficacy
- Option: Achievement
- Option: Impact
- Option: Probability

8. What is the term for an instance of two or more things hitting each other?

- Option: Daunting
- Option: Resilient
- Option: Collision
- Option: Contaminated

9. What term refers to a permanent alteration in the DNA sequence that makes up a gene?

- Option: Mutating
- Option: Pathogenicity
- Option: Mutation
- Option: Resilient

10. Which term denotes the ability to be maintained at a certain rate or level?

- Option: Sustainable
- Option: Mitigating
- Option: Asteroid
- Option: Transmission

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



11. An \_\_\_\_\_ is a widespread occurrence of an infectious disease in a community at a particular time.
12. \_\_\_\_\_ is defined as something that has been accomplished through effort or skill.
13. Efforts to \_\_\_\_\_ the spread of the virus have been implemented through strict quarantine measures.
14. The \_\_\_\_\_ energy generated by the sun is harnessed through solar panels for electricity.
15. The many species of birds found in this region indicate rich biodiversity and suitable \_\_\_\_\_.
16. Plant \_\_\_\_\_ involves the process of growing new plants from seeds cuttings or other plant parts.
17. The economic \_\_\_\_\_ of the pandemic has been felt across various industries worldwide.
18. Governments are implementing \_\_\_\_\_ measures to reduce the environmental impact of industrial activities.
19. Overcoming \_\_\_\_\_ often leads to personal growth and development.
20. The task of addressing global climate change can seem \_\_\_\_\_ due to its complexity and scale.

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

21. Despite facing many challenges the community showed strength and adaptability proving themselves to be .



22. The likelihood of rain tomorrow is high; therefore the of outdoor events should be considered.
23. The project's success was a result of a effort from all team members who worked together seamlessly.
24. Although he was the supervisor he had little actual authority over the team.
25. The doctor explained the modes of of the contagious disease to educate the public.
26. The water supply was found to be with harmful bacteria leading to a health alert.
27. The rocket's was carefully calculated to ensure it reached the intended orbit.
28. Winning the championship was a great for the team after years of hard work and dedication.
29. The medicine was tested for its in treating the new strain of virus.
30. An is a small rocky body that orbits the sun often found in the asteroid belt between Mars and Jupiter.

## Answer

**Multiple Choice:** 1. Infestation 2. Perseverance 3. Elucidated 4. Propagate 5. Enigmatic 6. Influenza 7. Impact 8. Collision 9. Mutation 10. Sustainable

**Gap-Fill:** 11. Epidemic 12. Achievement 13. Contain 14. Thermal 15. Habitation 16. Propagation 17. Impact 18. Mitigating 19. Challenges 20. Daunting

**Matching sentence:** 1. Resilient 2. Probability 3. Collaborative 4. Nominally 5. Transmission 6. Contaminated 7. Trajectory 8. Achievement 9. Efficacy 10. Asteroid

## CATEGORY

1. Sci/Tech - LEVEL5

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