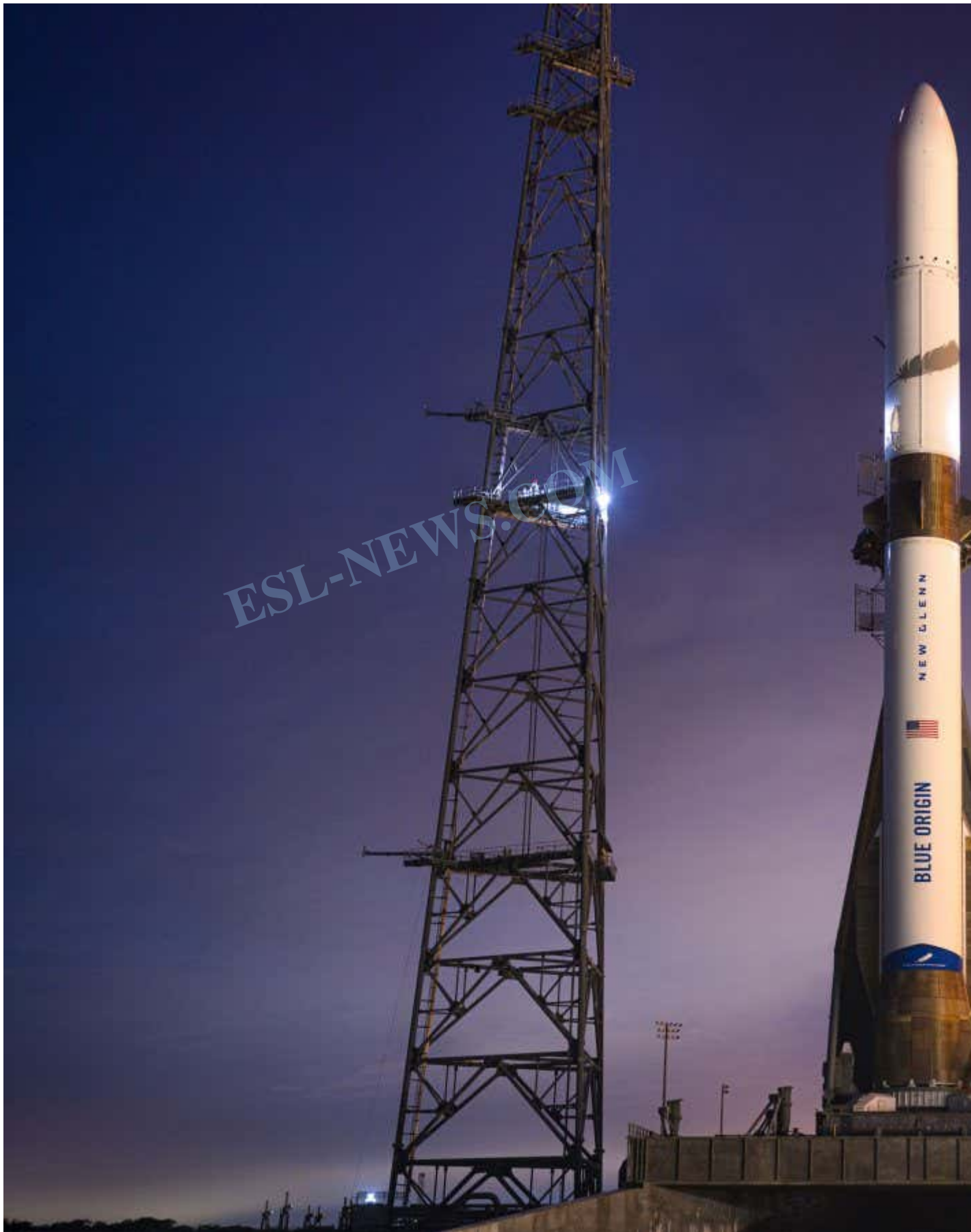




Blue Origin's New Glenn Launches Maiden Flight: Reusable Rocket Debut

Description

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Blue Origin, a space company owned by Jeff Bezos, the founder of Amazon, is preparing for the first launch of its reusable rocket named New Glenn on 10 January. This rocket aims to compete with SpaceX's Falcon Heavy, a popular choice for launching large payloads into space.

What is New Glenn?

New Glenn is an impressive 98-meter-tall rocket, almost the height of a 30-story building. It is designed to carry payloads weighing up to 45 tonnes into low Earth orbit. This puts it in competition with SpaceX's Falcon Heavy, which can handle around 64 tonnes of cargo.

The rocket consists of two stages. The first stage is meant to land on a sea platform, just like Falcon Heavy, with Blue Origin claiming it can be reused for up to 25 missions. The upper stage of the rocket is disposable and is used to store cargo and mission payloads.

When is the launch scheduled?

New Glenn is authorized by the Federal Aviation Administration to launch on 10 January from Cape Canaveral Space Force Station in Florida during a three-hour window starting at 1 am local time (6 am GMT). The previous launch window on 6 January was postponed to this new date. Blue Origin mentioned, "This is our first flight and we've prepared rigorously for it."

What will the test flight involve?

The primary goal of the test flight, known as NG-1, is for the rocket to reach orbit. Additionally, the second stage will carry Blue Origin's Blue Ring Pathfinder, a set of communication devices and power systems for future space missions. Blue Origin plans to learn and improve from this test flight, similar to SpaceX's approach.

Blue Origin hopes that New Glenn will eventually launch satellites for Amazon's Project Kuiper and contribute to a space station it is developing. In the past, Blue Origin has focused on space tourism with its New Shepard rocket, which has successfully launched Jeff Bezos and other passengers to high altitudes.

Other Rockets Launched by Blue Origin

Blue Origin has previously focused on space tourism with its New Shepard rocket, which in 2021 launched its founder Jeff Bezos and three other passengers to an altitude of 107 kilometres. It has since launched a further eight crews to a similar altitude, with the most recent launch in November 2024.

Topics:

Vocabulary List:



1. **Payload** /'peɪ.ləʊd/ (noun): The cargo carried by a rocket or spacecraft.
2. **Reusable** /,ri:'juː.zə.bəl/ (adjective): Capable of being used again especially after being refurbished.
3. **Authorize** /'ɔː.θə.raɪz/ (verb): To give official permission for something to happen.
4. **Mission** /'mɪʃ.ən/ (noun): An important goal or purpose that is accompanied by a course of action.
5. **Platform** /'plæt.fɔːrm/ (noun): A raised structure or surface where a rocket can be launched or recovered.
6. **Test** /tɛst/ (verb): To assess the performance or reliability of something through experimentation.

Comprehension Questions

Multiple Choice

1. What is the name of the reusable rocket being prepared for launch by Blue Origin?
Option: Falcon Heavy
Option: New Shepard
Option: New Glenn
Option: Blue Ring Pathfinder
2. What is the primary goal of the test flight NG-1?
Option: Launch satellites for Project Kuiper
Option: Test the Blue Ring Pathfinder
Option: Reach orbit
Option: Launch space tourism missions
3. Where is the launch of New Glenn scheduled to take place?
Option: Kennedy Space Center
Option: Baikonur Cosmodrome
Option: Cape Canaveral Space Force Station
Option: Vandenberg Space Force Base
4. How many stages does the New Glenn rocket consist of?
Option: One
Option: Two
Option: Three
Option: Four
5. What payloads can New Glenn carry into low Earth orbit?



- Option: Up to 20 tonnes
- Option: Up to 35 tonnes
- Option: Up to 45 tonnes
- Option: Up to 55 tonnes

6. Which space company does New Glenn aim to compete with?

- Option: NASA
- Option: Blue Origin
- Option: SpaceX
- Option: Boeing

True-False

- 7. New Glenn is designed to be a one-time use rocket.
- 8. Blue Origin has successfully launched multiple crews to high altitudes using New Shepard.
- 9. The first stage of New Glenn is intended to be reused for up to 25 missions.
- 10. The test flight NG-1 aims to carry out space tourism missions.
- 11. New Glenn is authorized by NASA for its launch on 10 January.
- 12. Blue Origin plans to use New Glenn for Amazon's Project Artemis.

Gap-Fill

- 13. The height of New Glenn is approximately _____ meters, almost the height of a 30-story building.
- 14. The upper stage of New Glenn is disposable and is used to store cargo and mission _____.
- 15. Blue Origin hopes that New Glenn will eventually launch satellites for Amazon's Project _____.



16. The New Shepard rocket has successfully launched Jeff Bezos and other passengers to high

_____.

17. Blue Origin previously focused on space tourism with its New _____ rocket.

18. The most recent launch by Blue Origin involved a crew reaching an altitude of _____
kilometers.

Answer

Multiple Choice: 1. New Glenn 2. Reach orbit 3. Cape Canaveral Space Force Station 4. Two 5. Up to 45 tonnes 6. SpaceX

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

Gap-Fill: 13. 98 14. payloads 15. Kuiper 16. altitudes 17. Shepard 18. 107

Vocabulary quizzes

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

1. What term describes the rivalry between companies in the same industry?

- Option: Regulation
- Option: Scattering
- Option: Competition
- Option: Payload

2. Who are scientists that study celestial bodies and phenomena?

- Option: Astronomers
- Option: Payload
- Option: Inaccuracies
- Option: Platform

3. What are actions taken to improve a situation or prevent further issues?

- Option: Implications
- Option: Interventions
- Option: Artificial
- Option: Authorize



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4. What describes the process of monitoring and enforcing rules?
- Option: Notifications
 - Option: Payload
 - Option: Regulatory
 - Option: Challenge
5. What term refers to something that can be used more than once?
- Option: Artificial
 - Option: Inaccuracies
 - Option: Reusable
 - Option: Compliance
6. What is the process of evaluating something to determine its quality or performance?
- Option: Luminous
 - Option: Test
 - Option: Violation
 - Option: Platform
7. What term signifies a task or situation that tests one's abilities?
- Option: Concerns
 - Option: Challenge
 - Option: Disintegrate
 - Option: Incidents
8. What is a specific task or goal that one is set to achieve?
- Option: Astronomers
 - Option: Payload
 - Option: Mission
 - Option: Scattering
9. What refers to the act of providing a brief overview of something?
- Option: Summarizing
 - Option: Strategic
 - Option: Artificial
 - Option: Implications
10. What term denotes the quality of being trusted or believed in?
- Option: Credibility
 - Option: Regulation
 - Option: Inaccuracies
 - Option: Payload



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

11. Non-compliance with regulations may result in _____.
12. Many expressed their _____ about the potential risks involved.
13. The aim is to establish guidelines to effectively _____ the industry.
14. The decision had far-reaching _____ that impacted various stakeholders.
15. Before deployment the system undergoes rigorous _____ to ensure functionality.
16. Users will receive instant _____ regarding any system updates.
17. The new software will serve as a versatile _____ for various applications.
18. Strict measures are in place to prevent security _____ from occurring.
19. The intelligence displayed by the system is purely _____ and not human-driven.
20. The government plans to introduce new _____ to address environmental concerns.

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

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|---|
| 21. The multinational corporation the market with its innovative products. |
| 22. The company formulated a plan to expand its reach globally. |
| 23. The glow of the stars illuminated the night sky. |
| 24. The phenomenon of light as it passes through the atmosphere was observed. |
| 25. There were numerous about the possible outcomes of the merger. |
| 26. The spacecraft carried a crucial for its upcoming mission. |
| 27. The report was criticized for its and lack of reliable data. |
| 28. Adhering to industry standards is essential for regulatory . |



29. Only top-level management can major decision-making processes.

30. The ancient manuscript started to due to its fragile condition.

Answer

Multiple Choice: 1. Competition 2. Astronomers 3. Interventions 4. Regulatory 5. Reusable 6. Test 7. Challenge 8. Mission 9. Summarizing 10. Credibility

Gap-Fill: 11. Violation 12. Concerns 13. Regulate 14. Implications 15. Test 16. Notifications 17. Platform 18. Incidents 19. Artificial 20. Regulation

Matching sentence: 1. Dominates 2. Strategic 3. Luminous 4. Scattering 5. Speculations 6. Payload 7. Inaccuracies 8. Compliance 9. Authorize 10. Disintegrate

CATEGORY

1. Sci/Tech - LEVEL3

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