Boeing's expensive rocket proposal for NASA's cost-effective Mars Sample Return mission

Description

NASA is exploring cost-effective ways to bring back rock samples from Mars, seeking industry proposals to achieve this. Boeing has revealed plans for a Mars Sample Return mission involving a single launch of the Space Launch System rocket. This concept, presented by Jim Green at the Humans to Mars summit, aims to reduce mission complexity and risks.

While the idea of a single launch sounds appealing, the high cost of the SLS rocket poses a challenge. NASA's inspector general has raised concerns about the expenses involved. The agency's Perseverance rover is currently collecting samples on Mars, with plans for a future mission to retrieve them.

Boeing's proposal includes using the SLS rocket to carry all necessary components for the mission. This streamlined approach contrasts with NASA's original plan, which involved multiple launches. As NASA considers various proposals for Mars Sample Return, decisions will be made in the coming years with the goal of bringing back samples from Mars in the 2030s.

Overall, the push for innovative and cost-effective solutions underscores the importance of space exploration and the quest to uncover the mysteries of Mars.

Vocabulary List:

1. **Cost-effective** // (adjective): Producing good results without costing a lot of money.
2. **Sample** // (noun): A small part or quantity intended to show what the whole is like.
3. **Mission** // (noun): An important task or assignment typically involving travel.
4. **Risks** // (noun): Chances of harm or loss.
5. **Complexity** // (noun): The state of being intricate or complicated.
6. **Retrieve** // (verb): To get backregainor recover something.

Vocabulary quizzes

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

1. What word means something that serves as a substitute or option?

   Option: Inconvenience
   Option: Alternative

Option: Complying
Option: Capsule

2. Which term refers to a device used to control the flow of a fluid?

Option: Astronaut
Option: Valve
Option: Countdown
Option: Pivotal

3. What word describes unforeseen issues that arise and make something more complex?

Option: Effectiveness
Option: Complications
Option: Interface
Option: Reconnect

4. Which term means something characterized by luxury and opulence?

Option: Adjustments
Option: Luxurious
Option: Mission
Option: Risks

5. What term is used to describe the study of the motion of air and other gases?

Option: Retrieve
Option: Aerodynamics
Option: Turbocharged
Option: Packs a punch

6. Which word means something that is restricted to a select group or class?

Option: Soured
Option: Turbocharged
Option: Exclusive
Option: Marred

7. What is the term for a strong negative reaction to something?

Option: Backlash
Option: Staggering
Option: Reconnect
Option: Cost-effective

8. Which word means improved or updated something?

Option: Revamped
Option: Astronaut
Option: Pivotal

Option: Marred

9. What term refers to the state of being intricate or complicated?

Option: Retrieve
Option: Complexity
Option: Sample
Option: Mission

10. What word describes something that provides the best value for the money spent?

Option: Risks
Option: Cost-effective
Option: Inconvenience
Option: Adjustments

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

11. The company reported a _____ loss in revenue for the quarter.

12. The book left a lasting _____ on the reader.

13. The space agency's _____ to Mars was a success.

14. The team made several _____ to the project timeline.

15. The new software has an intuitive user _____.

16. Please _____ the file from the backup drive.

17. The car's engine was _____ for improved performance.

18. The scientist collected a _____ of water for testing.

19. Investing in stocks comes with certain financial _____.

20. After years apart they decided to _____ and rekindle their friendship.

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

21. The success of this project is to the company's future.
22. Their once close relationship has now due to recent events.

23. As the clock ticked the astronauts began the final to the rocket launch.
24. The procedure involves a small device under the skin.
25. The success of the campaign will be measured by its in reaching the target audience.
26. Please go to the database and the relevant information.
27. The otherwise perfect evening was by an unexpected argument.
28. The medication is in the form of a gel for easy consumption.
29. Investors must consider the potential before committing to the project.
30. The construction work will cause some to our daily routines.

Answer

Multiple Choice: 1. Alternative 2. Valve 3. Complications 4. Luxurious 5. Aerodynamics 6. Exclusive 7. Backlash 8. Revamped 9. Complexity 10. Cost-effective
Gap-Fill: 11. staggering 12. imprint 13. mission 14. adjustments 15. interface 16. retrieve 17. turbocharged 18. sample 19. risks 20. reconnect
Matching sentence: 1. Pivotal 2. Soured 3. Countdown 4. Implanting 5. Effectiveness 6. Retrieve 7. Marred 8. Capsule 9. Risks 10. Inconvenience

CATEGORY

1. Sci/Tech - LEVEL3

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