



Dream Chaser spaceplane reusable and runway-ready

Description

When NASA's space shuttle program ended in 2011, it marked the last of the iconic black and white orbiters seen landing on news channels. However, a new spacecraft is expected to catch everyone's attention this year. This spaceplane is part of NASA's latest mission to transport supplies to the International Space Station, or ISS. Unlike previous craft, it won't have to fall into the ocean when it returns.

This new spaceplane, called "Tenacity," has been created by a company named Sierra Space. The company got a contract from NASA in 2016 under the Commercial Resupply Services 2 (CRS-2) program. The Tenacity is the first of the Sierra Space's new fleet. The plan is for it to make at least seven trips carrying cargo to the ISS and back, with no crew onboard.

The Dream Chaser, as it's commonly called, has been in development for many years. It might carry people in the future, but for now, it operates all by itself. Once launched, it's controlled remotely from the Mission Control Center in Colorado till it touches the ISS. Tenacity, with a cargo module nicknamed "Shooting Star," has the job of carrying roughly 12,000 pounds, about the weight of two Ford F-150 pickups, to the ISS. It can take a variety of cargo items, necessary supplies, new science gear, and replacement parts for the ISS.

Tenacity doesn't need space for passengers, so there's more room for cargo. Unlike spaceships with people, Tenacity doesn't have any windows. It will also transport items that will be disposed of upon return to Earth. These items will be burnt up in the atmosphere while reentry.

Tenacity's journey to the ISS is pretty exciting. It is transported to space inside a Vulcan rocket. Once in space, Tenacity follows particular steps to dock at the ISS. When it's time to return, unlike the water sinking of older spacecraft, Tenacity lands like a plane on a NASA runway. This allows the cargo to be accessed more quickly, as it doesn't have to be fished out of the sea.

This new spaceplane is not only about the same size as a small bus, but it's also much smaller than the old space shuttles. Its compact size and folding wings make it easier to fit inside various types of rockets for launch.

Vocabulary List:

1. **Orbiters** // (noun): Spacecraft designed to orbit a celestial body or space station.
2. **Spaceplane** // (noun): An aircraft designed for space travel.
3. **Resupply** // (verb): To replenish supplies or equipment.
4. **Cargo** // (noun): Goods or items being transported.
5. **Reentry** // (noun): The act of reentering the Earth's atmosphere from space.
6. **Dock** // (verb): To join or connect a spacecraft to a space station.



Comprehension Questions

Multiple Choice

1. Which company created the new spaceplane
Option: SpaceX
Option: Blue Origin
Option: Sierra Space
Option: Boeing
2. How many trips is the Tenacity expected to make to the ISS and back?
Option: 3
Option: 7
Option: 10
Option: 15
3. Which cargo module is attached to the Tenacity?
Option: Starlight
Option: Stardust
Option: Moonbeam
Option: Shooting Star
4. How much weight can the Tenacity carry to the ISS?
Option: 6,000 pounds
Option: 8,000 pounds
Option: 10,000 pounds
Option: 12,000 pounds
5. Where does Tenacity land when returning from the ISS?
Option: In the ocean
Option: On a NASA runway
Option: In a desert
Option: In a remote island
6. What is the size comparison of the new spaceplane to an old space shuttle?
Option: Smaller in size
Option: Larger in size



Option: Comparable in size

Option: Doubled in size

Answer

Multiple Choice: 1. Sierra Space 2. 7 3. Shooting Star 4. 12,000 pounds 5. On a NASA runway 6. Smaller in size

Vocabulary quizzes

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

1. What is the process of selling goods to the highest bidder called?

Option: Auctioned

Option: Renovated

Option: Comprehensive

Option: Correspondences

2. What term is used for broadcasting real-time video or audio content over the internet?

Option: Livestream

Option: Announcements

Option: Enthusiasts

Option: Sequel

3. What describes the manner in which someone or something functions?

Option: Critique

Option: Speculations

Option: Console

Option: Performance

4. In role-playing games who is responsible for creating and overseeing the game world and story?

Option: Teaser

Option: Performance

Option: Dungeon Master

Option: Criticism

5. What is the act of passing judgment or disapproval on something?

Option: Positive

Option: Orbiters

Option: Spaceplane



Option: Criticism

6. What is the process of returning to Earth from space called?

Option: Dock

Option: Galactic War

Option: Dungeon Master

Option: Reentry

7. What term refers to goods carried on a ship aircraft or vehicle?

Option: Collaborative

Option: Memorable

Option: Weave

Option: Cargo

8. What is the action of providing a person or place with fresh supplies called?

Option: Feedback

Option: Auctioned

Option: Resupply

Option: Teaser

9. What word describes something that is important or meaningful?

Option: Enthusiasts

Option: Sequel

Option: Significant

Option: Spin-off

10. Which term refers to focusing on or highlighting the good aspects of something?

Option: Critique

Option: Positive

Option: Orbiters

Option: Performance

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

11. Emails letters and phone calls are examples of different types of _____.

12. Collectors often seek out autographed items and souvenirs as _____ of notable events or people.



13. The storyline of the science fiction series revolved around a massive _____ threatening the existence of all civilizations.
14. The team worked together in a _____ effort to complete the project on time.
15. The artist was known for his _____ paintings that left viewers questioning their true meaning.
16. Fans who constantly follow a celebrity's every move are often referred to as their _____.
17. The popular TV show created a new series as a _____ centered on one of its secondary characters.
18. After the mysterious announcement numerous _____ arose regarding the company's future plans.
19. In her storytelling the author would intricately _____ together multiple plotlines.
20. To improve their services the company actively sought _____ from their customers.

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

21. The short promotional video served as a _____ to generate interest in the upcoming film.
22. Gamers use a _____ gaming to interact with video games and navigate virtual worlds.
23. The family vacation was filled with unforgettable moments and created many experiences.
24. Constructive _____ can help artists improve their skills and grow in their craft.
25. The textbook provided a _____ overview of the subject covering all important topics in detail.
26. Players battle each other in a virtual arena in popular games like Fortnite and _____.
27. Art students often receive constructive _____ from their professors to improve their techniques.



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| 28. During long space missions astronauts require periodic deliveries to their provisions. |
| 29. The discovery of ancient ruins was a find that changed the course of archaeological research. |
| 30. The scientific of the data revealed patterns that were crucial for understanding the phenomenon. |

Answer

Multiple Choice: 1. Auctioned 2. Livestream 3. Performance 4. Dungeon Master 5. Criticism 6. Reentry 7. Cargo 8. Resupply 9. Significant 10. Positive

Gap-Fill: 11. correspondences 12. memorabilia 13. galactic war 14. collaborative 15. enigmatic 16. orbiters 17. spin-off 18. speculations 19. weave 20. feedback

Matching sentence: 1. teaser 2. console 3. memorable 4. feedback 5. comprehensive 6. PUBG 7. critique 8. resupply 9. significant 10. analysis

CATEGORY

1. Sci/Tech - LEVEL3

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