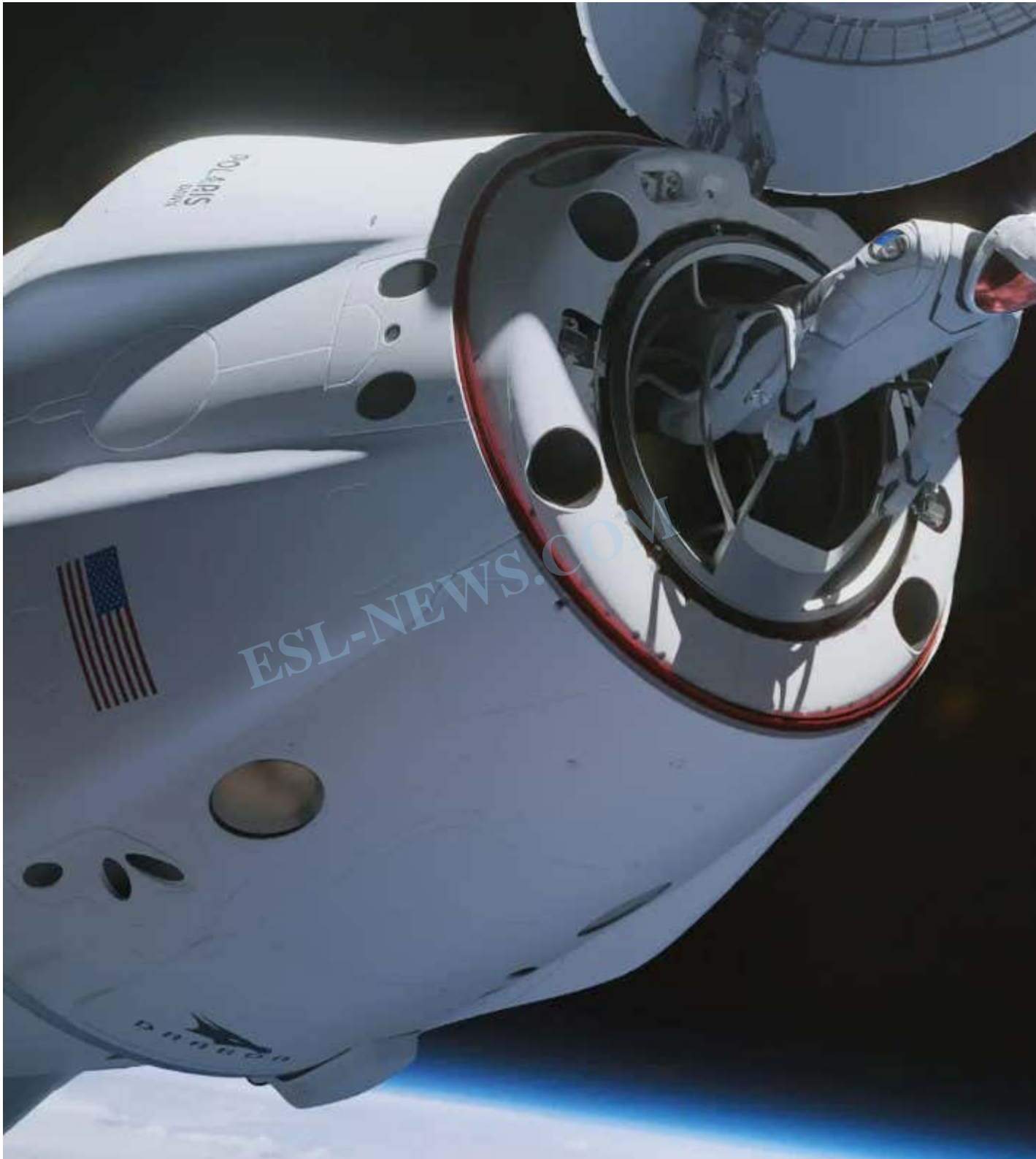




Revolutionizing Private Space Exploration: Polaris Dawn's Giant Leap

Description

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An artist's rendering of the spacewalk on the Polaris Dawn mission
SpaceX



SpaceX's Polaris Dawn mission marks a significant milestone in private space exploration, showcasing capabilities that have long been held by government space agencies. The mission, which included the first-ever spacewalk by private individuals, Jared Isaacman and Sarah Gillis, instead of government-employed astronauts, carried its own challenges.

Unlike the International Space Station, SpaceX's Crew Dragon craft lacked an airlock, requiring the entire capsule's air to be evacuated before the spacewalk could take place. This meant a new level of risk, especially given it was the first time SpaceX's new spacesuits and spacecraft were put to such a test.

While similar feats have been achieved by government agencies in the past, the significance lies in SpaceX's pioneering efforts. As space consultant Laura Forczyk emphasizes, every new achievement, no matter how old, is a first for those undertaking it.

The mission's success in testing new suits and conducting health experiments paves the way for advancements in human spaceflight. Despite being far from regular civilians, the Polaris Dawn spacewalkers have set the stage for future innovations in private space exploration.

Vocabulary List:

1. **Milestone** /'maɪlstəʊn/ (noun): An important event or turning point in a process.
2. **Spacewalk** /'speɪs,wɔ:k/ (noun): The act of performing work outside a spacecraft in space.
3. **Capsule** /'kæp.sju:l/ (noun): A sealed container or small spacecraft.
4. **Pioneering** /,paɪə'nɪərɪŋ/ (adjective): Involving new ideas or methods; innovative.
5. **Suit** /su:t/ (noun): In this context refers to a protective garment designed for space travel.
6. **Innovation** /,ɪnə'veɪʃən/ (noun): The act of introducing new ideas devices or methods.

Comprehension Questions

Multiple Choice

1. Who were the individuals who conducted the first-ever spacewalk on SpaceX's Polaris Dawn mission?

Option: Jared Isaacman and Sarah Gillis

Option: Neil Armstrong and Buzz Aldrin

Option: Yuri Gagarin and Valentina Tereshkova

Option: Elon Musk and Jeff Bezos

2. What was the main challenge faced by SpaceX's Crew Dragon craft during the spacewalk on the Polaris



Dawn mission?

- Option: Lack of sufficient oxygen supply
- Option: Absence of gravity
- Option: No proper communication with Earth
- Option: Absence of an airlock

3. What did Laura Forczyk emphasize regarding SpaceX's achievements in space exploration?

- Option: They are insignificant compared to government agencies
- Option: They are not considered groundbreaking
- Option: Every new achievement is a first for those undertaking it
- Option: SpaceX is just copying existing ideas

4. What did the success of the Polaris Dawn mission pave the way for?

- Option: Advancements in underwater exploration
- Option: Innovations in farming techniques
- Option: Advancements in human spaceflight
- Option: Developments in artificial intelligence

5. What new advancements were tested during the Polaris Dawn mission?

- Option: New communication satellites
- Option: New types of food for astronauts
- Option: Advanced medical equipment
- Option: New spacesuits and health experiments

6. Who are the spacewalkers on the Polaris Dawn mission considered as, despite not being regular civilians?

- Option: Alien explorers
- Option: Government astronauts
- Option: Future scientists
- Option: Pioneers in private space exploration

Answer

Multiple Choice: 1. Jared Isaacman and Sarah Gillis 2. Absence of an airlock 3. Every new achievement is a first for those undertaking it 4. Advancements in human spaceflight 5. New spacesuits and health experiments 6. Pioneers in private space exploration

Vocabulary quizzes



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

1. Which of the following is a chemical messenger that transmits signals across a synapse?
Option: Perception
Option: Anticipation
Option: Neurotransmitter
Option: Innovative
2. The scientific methods used in the investigation of crimes are related to which field of study?
Option: Insights
Option: Transmissible
Option: Forensic
Option: Emerged
3. What term best describes the act of being watchful or alert for possible danger or difficulties?
Option: Diverse
Option: Vigilance
Option: Characteristics
Option: Efficacy
4. Which activity involves an astronaut working outside a spacecraft in space?
Option: Milestone
Option: Spacewalk
Option: Capsule
Option: Pioneering
5. What term refers to the process of introducing new ideas or methods?
Option: Tailored
Option: Management
Option: Milestone
Option: Innovation
6. Which term best describes a range of different things or having variety?
Option: Underutilized
Option: Contraindications
Option: Diverse
Option: Insights
7. What term describes having a strong reason to act or accomplish something?
Option: Exhibitors
Option: Transmissible
Option: Motivated



Option: Emerged

8. Which term refers to the ability to acquire and apply knowledge and skills?

Option: Predominantly

Option: Symptoms

Option: Vigilance

Option: Intelligence

9. Which term signifies the action of creating or preparing something carefully?

Option: Spacewalk

Option: Capsule

Option: Formulated

Option: Pioneering

10. What term denotes something that is important or meaningful?

Option: Suit

Option: Innovation

Option: Significant

Option: Tailored

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

11. The students waited with _____ for the exam results to be announced.

12. Efficient _____ is essential for the success of any organization.

13. The virus is highly _____ and can be easily spread among populations.

14. A new leadership style has _____ in the company following the appointment of the new CEO.

15. Fever cough and fatigue are common _____ of the flu.

16. The study aimed to determine the _____ of the new drug in treating the condition.

17. The training facility is currently _____ and not operating at full capacity.

18. The marketing campaign was _____ to appeal to the younger demographic.

19. The breed of dog has specific _____ that make it well-suited for hunting.



20. The company is known for its _____ work in developing cutting-edge technology.

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

21. The research study provided valuable info into consumer behavior.
22. The astronaut climbed into the space before the mission.
23. The completion of the project marked a significant for the team.
24. The company prides itself on its approach to product development.
25. The astronaut put on the space before the spacewalk.
26. The evidence presented in court helped solve the crime.
27. The team a detailed plan for the project implementation.
28. Maintaining constant is crucial in high-security areas.
29. His exceptional allowed him to solve complex problems effectively.
30. The resources were and could have been better utilized for the project.

Answer

Multiple Choice: 1. Neurotransmitter 2. Forensic 3. Vigilance 4. Spacewalk 5. Innovation 6. Diverse 7. Motivated 8. Intelligence 9. Formulated 10. Significant

Gap-Fill: 11. Anticipation 12. Management 13. Transmissible 14. Emerged 15. Symptoms 16. Efficacy 17. Underutilized 18. Tailored 19. Characteristics 20. Pioneering

Matching sentence: 1. Insights 2. Capsule 3. Milestone 4. Innovative 5. Suit 6. Forensic 7. Formulated 8. Vigilance 9. Intelligence 10. Underutilized

CATEGORY

- 1. Sci/Tech - LEVEL4

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