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# Polaris Dawn: Private Space Exploration's Giant Leap

## Description

SpaceX recently made history with its Polaris Dawn mission, marking a significant achievement in private space exploration. The mission featured the first-ever spacewalk conducted by private individuals, Jared Isaacman and Sarah Gillis, rather than government astronauts.

This spacewalk was especially daring as the Crew Dragon craft used by SpaceX does not have an airlock like the International Space Station. Before venturing into space, the crew had to evacuate all air from the capsule. This mission was a test for SpaceX's new space suits and spacecraft in an extreme environment.

While some critics view this milestone as a repetition of past accomplishments, experts like Laura Forczyk emphasize the significance of every new achievement. The successful spacewalk, though criticized for its limited scope, served as a crucial test for the new spacesuits.

Aside from testing the suits, the crew also participated in health experiments to study the impact of space travel on the human body. This mission exemplifies how civilian space missions can contribute valuable data to space health research.

The crew members, though not traditional astronauts, have paved the way for future civilian space exploration. With the success of the Polaris Dawn mission, SpaceX is poised to continue pushing boundaries in space exploration and technology.

As the spacecraft prepares to return to Earth, the mission's accomplishments signal a growing role for private companies in space exploration, hinting at a future where private and government entities coexist in the realm of space exploration.

Topics: Space Exploration, SpaceX, Polaris Dawn Mission, Spacewalk, Space Suits

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## Vocabulary List:

1. **Exploration** /ɪkˌsplɔːrɪˈeɪʃən/ (noun): The act of traveling through an unfamiliar area to learn about it.
2. **Achievement** /əˈtʃiːv.mənt/ (noun): Something that has been accomplished particularly by effort.
3. **Evacuate** /ɪˈvæk.jə.ɪt/ (verb): To remove someone from a place of danger to a safer location.
4. **Significance** /sɪɡˈnɪfɪkəns/ (noun): The quality of being worthy of attention; importance.
5. **Civilian** /sɪˈvɪl.jən/ (noun): A person not in the armed services or the police force.
6. **Technology** /tekˈnɒlədʒi/ (noun): The application of scientific knowledge for practical purposes.



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## Comprehension Questions

### Multiple Choice

1. Who were the individuals who conducted the first-ever spacewalk during the Polaris Dawn mission?  
Option: Government astronauts  
Option: Jared Isaacman and Sarah Gillis  
Option: Laura Forczyk  
Option: Elon Musk
2. What was a significant feature of the Crew Dragon craft used by SpaceX during the mission?  
Option: Built-in airlock  
Option: Dual engines for faster speed  
Option: Landing gear for planetary surfaces  
Option: No airlock like the International Space Station
3. What was the purpose of evacuating all air from the Crew Dragon capsule before the spacewalk?  
Option: To conserve oxygen for the return journey  
Option: To test the vacuum durability of the spacecraft  
Option: To prevent contamination from Earth's atmosphere  
Option: To fix an air leakage issue
4. What aspect of the Polaris Dawn mission was criticized by some experts for its limited scope?  
Option: The health experiments conducted  
Option: The spacewalk itself  
Option: The crew compositions  
Option: The new space suits
5. What did the crew members participate in, aside from testing the spacesuits?  
Option: A culinary experiment  
Option: Health experiments on the impact of space travel on the human body  
Option: Structural engineering tests  
Option: Navigation studies for future space missions
6. What role do civilian space missions play, according to the content?  
Option: Strictly for entertainment purposes  
Option: Contribute valuable data to space health research



Option: No significant contribution to the space industry

Option: Competing with government space programs

## Answer

**Multiple Choice:** 1. Jared Isaacman and Sarah Gillis 2. No airlock like the International Space Station  
3. To prevent contamination from Earth's atmosphere 4. The spacewalk itself 5. Health experiments on the impact of space travel on the human body 6. Contribute valuable data to space health research

## Vocabulary quizzes

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

1. What term describes the variety and differences among people in a community?

Option: A) Unity

Option: B) Harmony

Option: C) Diversity

Option: D) Uniformity

2. Which term refers to the application of scientific knowledge for practical purposes?

Option: A) Innovation

Option: B) Tradition

Option: C) Technology

Option: D) Preservation

3. What is the term for providing assistance or encouragement to someone or something?

Option: A) Opposition

Option: B) Isolation

Option: C) Support

Option: D) Neglect

4. Who is a person not serving in the military or police force?

Option: A) Officer

Option: B) Civilian

Option: C) Enlistee

Option: D) Mercenary

5. Which term means to make something less severe serious or painful?

Option: A) Escalate

Option: B) Worsen



- Option: C) Mitigate  
Option: D) Intensify

6. What are inconsistencies or deviations from the norm or common rules called?

- Option: A) Patterns  
Option: B) Conformities  
Option: C) Regularities  
Option: D) Anomalies

7. What term describes the process of returning to a normal state after a period of difficulty?

- Option: A) Decline  
Option: B) Progress  
Option: C) Recovery  
Option: D) Deterioration

8. Which term describes feeling disappointed upset or discouraged because of the inability to achieve a goal?

- Option: A) Satisfied  
Option: B) Elated  
Option: C) Content  
Option: D) Frustrated

9. What term refers to the action or power of focusing one's attention or mental effort?

- Option: A) Scatter  
Option: B) Divergence  
Option: C) Absorption  
Option: D) Concentration

10. What is the invasion and multiplication of microorganisms in body tissues called?

- Option: A) Immunization  
Option: B) Infection  
Option: C) Vaccination  
Option: D) Sterilization

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

11. Efforts to \_\_\_\_\_ the environment for future generations are crucial.

12. During the emergency all residents were asked to \_\_\_\_\_ the area immediately.

13. The solar eclipse was a natural \_\_\_\_\_ that amazed the onlookers.



14. Fever and cough are common \_\_\_\_\_ of the flu.
15. The police are investigating the \_\_\_\_\_ of valuable artwork from the museum.
16. Overcoming obstacles can be a daunting \_\_\_\_\_ but also an opportunity for growth.
17. The hospital used a \_\_\_\_\_ solution for cleaning wounds.
18. \_\_\_\_\_ is the process of population shift from rural to urban areas.
19. Understanding the biological \_\_\_\_\_ behind diseases is crucial for effective treatment.
20. Plants get water and nutrients through the process of \_\_\_\_\_ from the soil.

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

21. The organization provided assistance and guidance to the struggling families in the community.
22. She took the _____ to organize a charity event to help raise funds for the homeless shelter.
23. The scientific team embarked on an extensive _____ of the uncharted territory in search of new species.
24. Winning the championship was a remarkable _____ for the young athlete.
25. The quick and efficient emergency _____ saved many lives during the natural disaster.
26. The successful project was the result of excellent teamwork and _____ among all members.
27. The company conducted a thorough audit to analyze its budget and expenditures.
28. The historical event had great _____ in shaping the future of the nation.
29. The young artist's _____ of different art styles greatly influenced her unique creations.
30. Due to the approaching hurricane the authorities ordered the residents to _____ the coastal region.

**Answer**

**Multiple Choice:** 1. C) Diversity 2. C) Technology 3. C) Support 4. B) Civilian 5. C) Mitigate 6. D) Anomalies  
7. C) Recovery 8. D) Frustrated 9. D) Concentration 10. B) Infection

**Gap-Fill:** 11. sustain 12. evacuate 13. phenomenon 14. symptoms 15. theft 16. challenge 17. saline  
18. Urbanization



19. mechanisms 20. absorption

**Matching sentence:** 1. Support 2. Initiative 3. Exploration 4. Achievement 5. Response 6. Cooperation  
7. Financial 8. Significance 9. Exploration 10. Evacuate

## CATEGORY

1. Sci/Tech - LEVEL3

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