C1-C2 English Worksheet
NASA's 378-Day Mars Isolation Experiment: Life Inside the Habitat

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Article

On 31 October 2026, four volunteers emerged from NASA's Mars Dune Alpha habitat in Houston after 378 days of self-imposed isolation. The second Crew Health and Performance Exploration Analog (CHAPEA) mission had begun in October 2025, inside a 3D-printed structure covering roughly 158 square metres. Far from being an elaborate holiday, the project set out to examine how a small crew holds up under the constraints of a distant planetary expedition. Commander Ross Elder, medical officer Ellen Ellis, science officer Matthew Montgomery and flight engineer James Spicer conducted research, grew crops and maintained the habitat while contact with outsiders was tightly controlled.

NASA deliberately built in communication delays to reflect the time needed for radio messages to travel between planets. Researchers also cut off contact during a planned two-week blackout, forcing the team to fall back on prepared procedures. When setbacks cropped up, the crew could not count on immediate guidance from mission control. They had to ration supplies, make trade-offs and iron out problems together. Personal differences, uncertainty and the monotony of repetitive tasks posed potential sources of strain. However, NASA has not yet published definitive findings about the psychological effects of this particular experiment.

After leaving the habitat, the volunteers were scheduled for two weeks of evaluations and debriefings. The exercise should shed light on how restricted resources and delayed feedback influence human performance, although it could not replicate Martian gravity, radiation or the consequences of an emergency millions of miles from Earth. NASA hopes the results will feed into plans for future Moon and Mars missions. Beyond space exploration, the experiment raises an uncomfortable question: could you tolerate months of isolation, limited privacy and no spontaneous contact with loved ones? Successful deep-space crews may need emotional resilience and social intelligence as much as technical expertise.

True/False

Decide if each statement is True (T) or False (F).

No.	Statement	T / F
1	The CHAPEA crew conducted the experiment on the actual surface of Mars.	
2	The volunteers lived inside a habitat produced using three-dimensional printing.	
3	Communication delays were intentionally introduced as a research condition.	
4	The two-week communications blackout resulted from an unplanned equipment failure.	
5	NASA has already published conclusive evidence of this crew's psychological responses.	
6	During the simulation, crew members sometimes had to solve problems without prompt outside advice.	
7	Post-mission evaluations were scheduled after the volunteers emerged.	
8	The study recreated Martian radiation and gravity as well as an actual emergency far from Earth.	

Phrase Match

Match the phrases (1-10) to the correct definitions (A-J).

Phrases (1-10)	Definitions (A-J)
1. set out to	A. appeared unexpectedly
2. holds up under	B. included something as a planned feature
3. built in	C. resolve difficulties through discussion or action
4. cut off	D. use something as a backup when needed
5. fall back on	E. help people understand something better
6. cropped up	F. begin with the intention of achieving something
7. count on	G. contribute to and influence a wider process
8. iron out	H. depend on someone or something
9. shed light on	I. continues to function despite pressure
10. feed into	J. stopped communication or access

Synonym Match

Match the words (1-10) to the correct synonyms (A-J).

Words (1-10)	Synonyms (A-J)
1. constraints	A. tedium
2. deliberately	B. proficiency
3. setbacks	C. reproduce
4. monotony	D. possible
5. definitive	E. restrictions
6. replicate	F. unplanned
7. spontaneous	G. reversals
8. expertise	H. limited
9. potential	I. conclusive
10. restricted	J. intentionally

Use the New Language

Choose 5 words or phrases from the worksheet and write your own sentences.

No.	Your sentence
1	
2	
3	
4	
5	

Discussion Questions

Student A	Student B
1. Would you volunteer for a prolonged isolation experiment? What conditions would you insist on?	1. Can voluntary confinement reliably predict how astronauts would behave on a real Mars mission?
2. Which personal routine would be most difficult to maintain without outside contact?	2. How should NASA balance realistic stress tests with its duty to protect volunteers?
3. How do you respond when a group must make decisions without quick feedback?	3. Is emotional resilience or technical expertise more critical when selecting a four-person crew?
4. Have you ever lived or worked with people whose habits were very different from yours?	4. Could communication delays encourage independence, or would they undermine sound judgement?
5. Would you prefer complete solitude or four-person confinement for several months?	5. Should astronauts be entitled to private space even if it reduces the room available for research?
6. What kinds of small disagreements tend to crop up in shared accommodation?	6. What ethical limits should apply when researchers deliberately introduce uncertainty or isolation?
7. Would you find delayed conversations with family more difficult than the physical restrictions?	7. Who should have final authority during a communications blackout: the crew or mission control?
8. Which personal strengths might help you hold up under a demanding long-term assignment?	8. Do the potential scientific benefits justify the substantial cost and personal sacrifices of Mars exploration?

Answer Key

True/False	1=F, 2=T, 3=T, 4=F, 5=F, 6=T, 7=T, 8=F
Phrase Match	1=F, 2=I, 3=B, 4=J, 5=D, 6=A, 7=H, 8=C, 9=E, 10=G
Synonym Match	1=E, 2=J, 3=G, 4=A, 5=I, 6=C, 7=F, 8=B, 9=D, 10=H

Example Sentences With the Phrases

No.	Example sentence
1	NASA set out to investigate how people adapt to long-term isolation.
2	A strong team holds up under pressure when resources become scarce.
3	The researchers built in communication delays to simulate conditions near Mars.
4	Mission planners cut off contact for a scheduled two-week exercise.
5	The crew could fall back on written procedures during the blackout.
6	If unexpected problems cropped up, the volunteers had to respond independently.
7	The team could not always count on immediate advice from mission control.
8	Crew members worked together to iron out disagreements and technical issues.
9	The findings may shed light on the effects of extended confinement.
10	Results from the experiment could feed into future mission planning.