Headlines about NASA’s Twins Study Stir Public Confusion

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Category : Science/Environment

Unlocking Word Meanings

Read the following words/expressions found in today’s article.

1. ***aboard*** / **əˈbɔrd** / (adv) – carried on a transportation vehicle
   Example: The astronauts were ***aboard*** the International Space Stations for six months.
2. ***headline*** / **ˈhɛdˌlaɪn** / (v) – to put a title in a report or article
   Example: News websites ***headlined*** their articles with details of the shuttle launch.
3. ***rebut*** / **rɪˈbʌt** / (v) – to disprove something or to present arguments
   Example: The scientist planned to ***rebut*** what the journalist said through an interview.
4. ***isolation*** / **ˌaɪ səˈleɪ ʃən** / (n) – the state or condition of being alone and separated from others
   Example: He was the only astronaut in the International Space Station. His ***isolation*** made him sad.
5. ***hostile*** / **ˈhɒs tl** / (adj) – unpleasant or unfriendly
   Example: Mercury’s environment is so ***hostile***; many believe it cannot sustain any life form.

Article

Read the text below.

Several news sites have incorrectly reported that astronaut Scott Kelly is no longer identical to his twin brother.

Retired astronauts Scott and Mark Kelly are NASA’s first and only identical twins who are part of the agency’s Twins Study program. With this project, NASA aims to get insights on the changes that happen to people who travel to space and those who remain earthbound.

For the Twins Study, Scott went **aboard** the International Space Station for 340 days, which is much longer than the usual six-month mission. After the mission, NASA compared the twins in several aspects.

When Scott came back, some news sites incorrectly **headlined** their reports saying that the twins were no longer identical. Some even cited a 7% change in Scott’s DNA. However, some experts **rebutted**, saying that Scott’s DNA did not change by 7%. If it had changed just by over 2%, Scott would be more different from another human being than a chimpanzee.

Experts said that the news sites mistook DNA—how genes are arranged—with gene expression, which is how genes function within the cell. In the Kellys’ case, Scott’s immune system became hyperactive compared to Mark’s because of the former’s exposure to space.

NASA plans to use studies on prolonged spaceflight, including Scott’s 340-day mission, to determine the effects of five factors—space radiation, **isolation**, distance from Earth, gravitational conditions, and **hostile** environments—on humans. The agency is compiling the data in preparation for a possible mission to Mars, which would take about three years.

Viewpoint Discussion

Enjoy a discussion with your tutor.

Discussion A

• If extended missions to space were proven to cause major changes in astronauts, should future missions still proceed? Explain.

• Would you be willing to risk your own health for a study or cause that you believe in? Why or why not?

Discussion B

• How do you think astronauts build physical and mental strength to cope with the conditions in space? Discuss.

• Which of the five factors mentioned (space radiation, isolation, distance from Earth, gravitational conditions, hostile environments) would be most difficult for astronauts to handle? Why?

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