

371 DAYS



A YEAR IN SPACE

Astronaut Frank Rubio accidentally spent a record-breaking length of time in space.

LEXILE: 990L (800L alternate reading level)

SCIENCE (NGSS) STANDARD: Earth's Place in the Universe

COMMON CORE (CCSS) STANDARDS: RI.6-8.1, RI.6-8.3, SL.6-8.1, W.6-8.3

ENGAGE THE READER

Start the lesson by asking students if they'd be interested in visiting space. If so, how long would they like to stay? Then provide each student with a sticky note. Have them write down their guess for the record number of days in space by a NASA astronaut. Collect the sticky notes and take a look at the guesses. Did anyone guess 371 days? Explain that record was accidentally set in September. Have students read "A Year in Space" to learn more.

QUESTIONS FOR CLOSE READING AND DISCUSSION

- Why did Frank Rubio spend so long on the International Space Station?
- For what reasons is exercise important in space?
- What are some challenges of being in space?
- How does Rubio feel about space travel?

EXTEND LEARNING

Engage students in a discussion about life in space. Open up the conversation by asking: "Would you like to travel to and live aboard the ISS?" Have the class discuss what life might be like aboard the ISS.

Explain that some hazards to deep-space astronauts are encapsulated in the acronym RIDGE: *radiation* exposure, *isolation* and loneliness, *distance* from Earth, the effects of different *gravity*, and *environments* that are hostile or closed. Today students are going to focus on the concern of isolation. Have them listen to the *Houston, We Have a Podcast* episode at [ti.me/NASApodcast](https://www.nasa.gov/podcast), starting at minute marker 47:57. Then have students write a journal entry from the point of view of an astronaut aboard the ISS. For an added challenge, have them write an entry from Frank Rubio on one of his first days and from one of his final days in space.

COVER STORY QUIZ + ANSWER KEY

The cover quiz can be found on page 3 of this guide.

To create a digital quiz, you can use our template [here](#).

1. C (RI.2) **2. B** (RI.1) **3. D** (RI.6) **4. B** (RI.4) **5. A** (RI.1)

6. D (RI.5) **7. Answers will vary.** (W.2)

RECOGNIZING QUALITY JOURNALISM

Below is an excerpt from the third lesson in our media-literacy unit plan. Check out the full two-day lesson at [ti.me/MediaLitLesson3](https://www.time.com/time/mediatlit/lesson3).

ESSENTIAL QUESTIONS

- What rules and guidelines should journalists aspire to follow when reporting a news story, and why?
- How should journalists choose sources for their articles?

INTRODUCTION

Provide students with a copy of the “Credibility Comparison” spread at [ti.me/comparison](https://www.time.com/time/mediatlit/comparison). Have them skim both articles and note which they think is more credible. They’ll return to this at the end of the lesson.

WHOLE GROUP WORK

Introduce students to these seven key standards of quality journalism ([ti.me/qualityjournalism](https://www.time.com/time/mediatlit/qualityjournalism)) from the News Literacy Project, and give each student a copy. Read through each of the standards. As you do, ask students to share some ways that journalists can work to meet these standards. Then have them turn and talk about why they think each is important. Pull up the credibility comparison from earlier and discuss it: Who were the sources in each? What makes them credible or not credible? Were the sources and points of view balanced? Which of the two articles had proper documentation? Explain. Have students vote on which is the more credible article. For extra practice, partner students up and provide pairs with a copy of the “Get Inside the Story” spread at [ti.me/insideTheStory](https://www.time.com/time/mediatlit/insideTheStory). Have them identify and notate elements in the story that help the writer meet the standards of quality journalism. Bring the class back together to share what they noted.



NASA’S DIRT GUY

John Gruener studies soil at NASA. His work is crucial to the agency’s plans to build research bases on the moon and Mars.

SCIENCE (NGSS) STANDARD: Biological Evolution

COMMON CORE (CCSS) STANDARDS: RI.6-8.1, RI.6-8.2, SL.6-8.1, W.6-8.2

BEFORE READING

Start by taking a class poll: Who thinks people will one day live on the moon? Have volunteers share their reasoning. Then ask students what might be needed for people to inhabit the moon. Tell students they’ll be reading about someone whose research might help make research bases on the moon a reality.

DISCUSSION QUESTIONS

- How does John Gruener conduct his studies?
- Why did Gruener switch from being an engineer to being a scientist?

CLOSING ACTIVITY

Have students read the paired text, “Lunar Farming,” at [ti.me/moonFarm](https://www.time.com/time/mediatlit/moonFarm). As they read, have them take notes comparing and contrasting the research done by John Gruener and Stephen Elardo. Then have them put on their scientist hats and do their own soil experiment. Choose three soil samples (sandy soil, clay soil, peat soil, for example). Plant seeds in each. Record how the seeds grow in each of these soils over time.

Name _____ Date _____

Use this week's cover story, "A Year in Space," to answer the questions below. For questions 1–6, circle the letter next to the best answer. If you need more space to write your response to question 7, use the back of this page.

<p>1. What is this article mainly about?</p> <p>A. the risks of human spaceflight</p> <p>B. how to fix coolant leaks on a spacecraft</p> <p>C. Frank Rubio's experience of living in space</p> <p>D. Rubio's experience after returning to Earth</p>	<p>4. Based on the context, which is the best definition for <i>readaptation</i>?</p> <p>A. adjusting to new experiences</p> <p>B. getting used to familiar experiences again after time away</p> <p>C. the effects that gravity has on the human body</p> <p>D. when a person feels 90 to 95% normal</p>
<p>2. Which best describes a typical day in space for Rubio?</p> <p>A. rocket launches, spacewalks, and video conferences</p> <p>B. experiments, exercise, and ISS maintenance</p> <p>C. experiments, haircuts, and spacewalks</p> <p>D. experiments, spacewalks, and ISS maintenance</p>	<p>5. What does Rubio say was the biggest challenge for him in space?</p> <p>A. being away from his family</p> <p>B. not having salad to eat</p> <p>C. an incredibly busy schedule</p> <p>D. difficult experiments</p>
<p>3. What is Rubio's perspective on physical exercise?</p> <p>A. He enjoys it.</p> <p>B. He believes it helps mental health.</p> <p>C. He was too busy to focus on it in space.</p> <p>D. both A and B</p>	<p>6. Which question is answered by the sidebar, "International Platform"?</p> <p>A. How many people can live inside the ISS at once?</p> <p>B. What is the record for longest time aboard the ISS?</p> <p>C. How do astronauts get to the ISS?</p> <p>D. What is the size of the ISS?</p>

7. Would you ever want to break the record for most time in space? Why or why not?
