



WHY WE SHOULD  
CONTINUE TO EXPLORE  
SPACE



WHY WE SHOULD SAVE  
EARTH BEFORE  
COLONIZING MARS

## COMPARE NONFICTION

In this lesson, you will read two argumentative essays that offer different perspectives on exploring and colonizing space. You will then compare the authors' arguments.

### About the Author

**Sheri Buckner** is a writer and artist based in Chicago. She holds a degree in English from the University of Nebraska.

## Concept Vocabulary

As you read "Why We Should Continue to Explore Space," you will encounter these words. When you finish reading, work with your group to identify what these words have in common.

improve

striving

persist

**Context Clues** Clues in the surrounding text can help you determine the meaning of an unfamiliar word. An **antonym**, or word with an opposite meaning, can provide a clue by indicating contrast.

### EXAMPLE

Tomorrow's basketball practice is **mandatory**; the one on Thursday, however, is optional.

### PRACTICE

As you read, study the context and look for antonyms to help you determine the meanings of unfamiliar words. Mark any antonyms you find.

## Reading Strategy: Make Predictions

A **prediction** is an educated guess about a text's main ideas that is made before reading. You can make a prediction about an argument by analyzing the text's structure.

- The **title** often indicates the topic and may suggest the author's opinion about it.
- **Headings** show how the text is organized and how the author develops the argument, section by section.
- **Images**, such as graphs, charts, or photographs, provide supporting evidence and help illustrate certain points.
- **Captions** provide additional information about the images.

### PRACTICE

Before you read, scan the major sections and features of the text. Then, write your predictions in the open space next to the text.

# Why We Should Continue to Explore Space

Sheri Buckner



## BACKGROUND

This article addresses the topic of space exploration in an era of competing national priorities. It is designed to convince readers that exploring space can help us address pressing issues on our planet.

- 1 **E**nvironmental problems. Public health and safety concerns. Social equality issues. When we face such serious challenges here on Earth, why would we devote precious money, time, and effort to space exploration? The answers are clear and compelling.

## Exploring space gives us new insights.

- 2 Overcoming the challenges of working in space has led to scientific advances that benefit the environment, medicine, transportation, energy, public safety, and information technology. For example, investigating ways to grow food in low-gravity environments, such as on Mars, helps us find strategies for raising crops in extreme conditions on Earth. This information could aid in reducing the negative impacts of worldwide hunger and changing ecosystems. In addition, medical research conducted in space provides fresh understandings about the human body, helping to **improve** our quality of life.
- 3 The more we learn about what lies beyond Earth, the better we understand our own planet. Space is an endless source of knowledge that helps us answer key questions about the origins of Earth and its place in the universe. Studying the solar system has increased our understanding of our atmosphere, our magnetosphere,<sup>1</sup> gravity, and more. For instance, when we sent

## READ TO UNLOCK MEANING

1. First read the text for comprehension and enjoyment. Use the **Reading Strategy** and **Comprehension Check** questions to support your first read.
2. With your group, apply the vocabulary strategy to unlock word meanings.
3. Find other details in the text you find interesting. Ask your own questions and draw your own conclusions.

Mark context clues or indicate another strategy you used that helped you determine meaning.

**improve** (ihm PROOV) *v.*

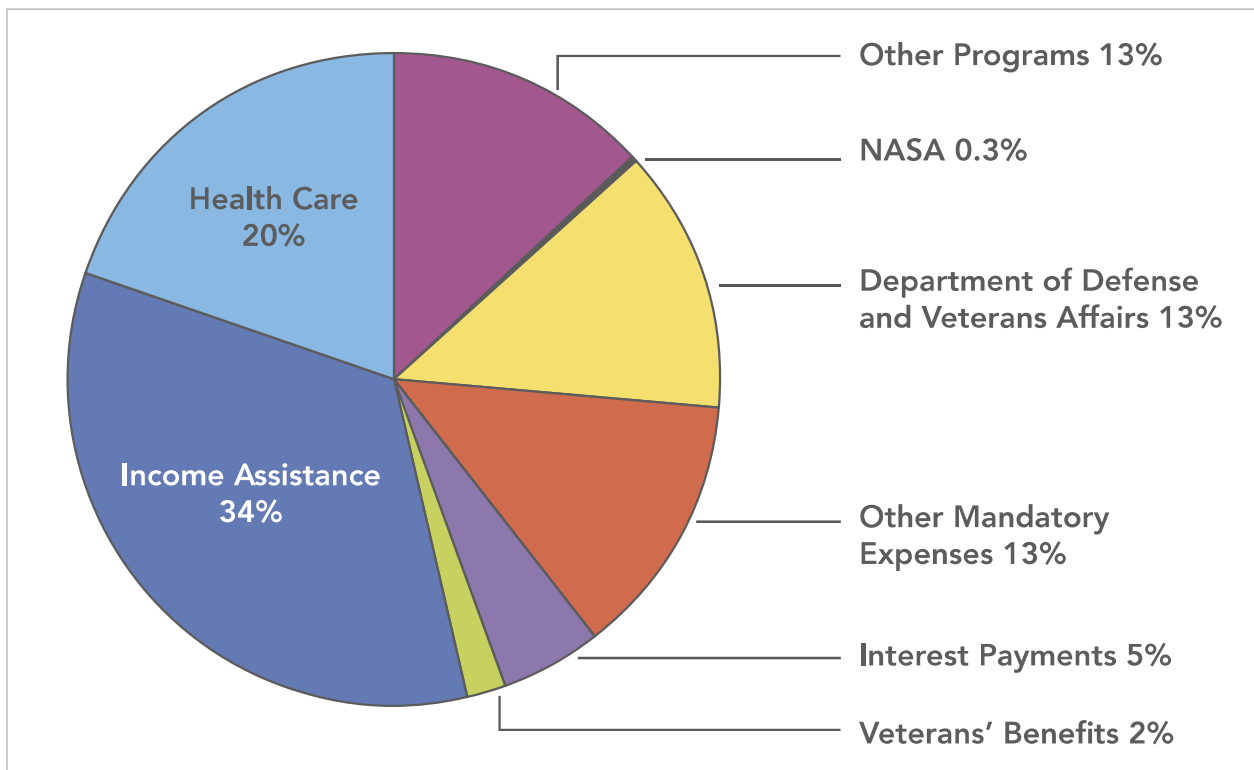
MEANING:

1. **magnetosphere** (mag NEE tuh sfeer) *n.* magnetic field that surrounds a planet.

spacecraft to Venus, we were able to see how a habitable planet turned into one with a deadly landscape because of an out-of-control greenhouse effect. Astronauts who travel into space see the fragility of our atmosphere and the delicate balance that keeps our planet livable for humans. This perspective emphasizes the importance of protecting our Earth and encourages efforts to do so.

### Space exploration costs less than you realize.

- 4 Some critics argue that it doesn't make sense to spend money on space exploration when those funds could be used to address pressing problems on Earth. However, the money spent on NASA has a positive impact on the U.S. economy. It generates advancements in technology that have practical applications. It also creates and supports new businesses as well as high-paying, highly skilled jobs. This, in turn, strengthens the overall economy. A stronger economy means there is a larger pool of money we can spend on finding solutions to other important economic, technological, environmental, and social problems.
- 5 Like many other nations, the U.S. earmarks money for space exploration in the country's annual budget. Most Americans know that funding for NASA is part of the total U.S. budget, but many people significantly overestimate the percentage that is allotted. Opinion polls show that some believe this figure to be as much as



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^ Approximate budget for U.S. government for year 2020

25% of federal spending. In reality, however, NASA's funding represents only about 0.3% of the budget.

### Outer space fuels our imaginations.

- 6 For decades, children have imagined life on other planets and voyages through the cosmos. While few of them may ever travel into space, those ideas can motivate kids to pursue scientific careers in medicine or engineering—fields that can benefit society and help resolve or prevent some of our Earthly problems.
- 7 Adults are inspired by space as well. We marvel at the beauty and enormity of the universe when we stargaze or see images of Mars from NASA's *Perseverance* rover. We consider the possibility that life could exist elsewhere in the galaxy, reminding us that there could be beings on other planets who are struggling with some of the same issues we face on Earth. There is something wonderful and heartening about **striving** to discover something that might forever change the world we live in for the better.

### Exploring space benefits Earth.

- 8 It's true that we need to address many significant problems that affect our world. However, our efforts to confront and conquer those problems shouldn't come at the cost of making new discoveries in space. We can do both. The social and environmental issues we're dealing with do not **persist** because of the money our government spends on space exploration. In fact, such funding may help us solve Earth's most urgent problems. 🚀

#### MAKE PREDICTIONS

Based on its heading, what do you predict the author will discuss in paragraph 6?

Mark context clues or indicate another strategy you used that helped you determine meaning.

**striving** (STRY vihng) v.

MEANING:

**persist** (puhr SIHST) v.

MEANING:

#### COMPREHENSION CHECK

What are the three main reasons the author gives for maintaining our space exploration program?