Springboard 6

Would You Travel in Space?

Fact

Text Type	2400–3000 words	3100–3500 words	3500+ words
Discussion	Do You Like Fast Food?	Do You Like Watching TV?	Would You Travel in Space?
Exposition (Proposition/ Support)	Cars! Cars! Cars!	Litter at the Top of the World	The Polar Bear Problem
Information Report (Cause/Effect)	Bushfires!	The Piece of Paper Path	A Sneeze Is Coming On
Survival Story	Trapped in the Tube	Against All Odds	I Survived a Shark Attack

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We have designed these lesson plans so that you can have the plan in front of you as you teach, along with a copy of the book. Suggestions for teaching have been divided into questions and discussion that you may have with students before, during, and after they read. You may prefer to explore the meaning and the language in more detail before students read. Your decisions will depend on the gap between students' current knowledge and the content, vocabulary, and language of the book they are about to read. The more information students have up front, the easier it will be for them to read the text.

WOULD YOU TRAVEL IN SPACE?

Upper level fact
Text type: Discussion
Reading age 12–12.5
Word count 3500+

Guide questions for teachers are in *italics*.

Before Reading

Activate prior knowledge by asking students to brainstorm the different ways information can be presented in books, magazines, or web pages.

Explain to students that one way of presenting information is through a discussion. A discussion presents more than one point of view about a topic. When a book is written as a discussion, different points of view are presented to the reader, and the reader can make up his or her own mind about the topic.

COVER

Before Reading

Read the title and examine the cover photograph. Discuss what the book may be about. *Why do you think these images have been chosen for the cover? Why do you think the title is written as a question?*

Read the blurb. *What additional information does this give you? What do you expect to find inside this book?* Guide the discussion to build understandings that this book is written as a discussion and the reader is going to read about the pros and the cons of space travel.

How do you feel about space travel?

What might the pros of space travel be?

What might the cons be?

CONTENTS PAGE

Open the book. Tell me what you know about this page. Discuss features of the contents page. What can you expect to learn from this book?

What special features does this book have? Discuss the terms *glossary* and *index*. Ask students to explain what each term means and to predict some of the words they would expect to see in the glossary in this book. Have students visit the index and glossary. Clarify that the glossary provides meanings for new or unusual words about the topic, and the index provides the page numbers to help the reader locate particular things in the book.

Discuss the term *introduction*. *What does this mean?* Guide students to understand that an introduction provides general information about the topic, which will help us read the book. *Do you think this might be a useful place to start?*

INTRODUCTION

Before Reading

Walk through the first chapter to discuss the information contained in the photos, captions, and table up to page 7. *Which country has sent the most astronauts into space? Why do you think this is? Why is Australia not on this graph?*

Read the introduction and be ready to share what you learn about space travel. Jot down any interesting facts to share.

After Reading

Are there any words we need to clarify? Clarify any tricky words or phrases before discussing. Invite students to share what they have learned about travel into space.

What happens when you are taking off? What does it look like, sound like, and feel like?

What is meant by the term space age*? When did the space age begin?*

What are space stations, space shuttles, and robotic probes?

What do people need to do to become astronauts? Why do you think astronauts need a degree in engineering, science, or maths? Why do astronauts need to be fit and healthy and have very good eyesight?

WHY TRAVEL IN SPACE?

Before Reading

Walk through this chapter and discuss the illustration, photos, and captions. Invite students to give reasons to support going into space and reasons not to travel into space.

Discuss the words *gravity*, *atmosphere*, and *radiation*. Invite inferences about the meaning of these words and check the glossary definitions.

Read this chapter and be ready to chat about the pros of space travel.

After Reading

Invite students to share the pros of space travel.

What are the cons of space travel? Encourage students to elaborate as needed.

Would you travel into space? Why/why not?

LIFE IN SPACE

Before Reading

Invite students to look at and discuss the photos and captions to build knowledge of this content.

Read this chapter to find out about life in space.

Be thinking about the pros and cons as you read. Write down a few ideas ready for discussion.

After Reading

What are some pros and cons of life in space?

What do you know about meals in space? Do you see this as a pro or a con?

Discuss some of the simple, everyday things that are done differently in space.

Describe what happens to astronauts' bodies while they are in space. What impact can this have when people are back on Earth?

DANGERS IN SPACE

Before Reading

Discuss the table, flow chart, and photos throughout this chapter. Support students to build content knowledge of the dangers in space.

Prompt students to notice the words *air pressure*. Invite students to predict what this means and check the glossary meaning.

Read this chapter and be ready to share what you learn about the dangers in space.

After Reading

Encourage students to share what they have learned.

What is the problem with oxygen while travelling in space? What happens to the air the astronauts breathe out?

What does the term pressurized *mean?*

Why is fire a major risk in space?

What are the risks to astronauts when they travel outside their spacecraft?

ACCIDENTS IN SPACE

Before Reading

Discuss the photos and captions to build background knowledge. Invite students to predict what some of the accidents might be. Invite students to infer what may cause accidents in space. *Why are astronauts so vulnerable if anything should go wrong?*

Read these pages and be ready to share what you learn about accidents in space.

After Reading

What kinds of accidents have occurred in space? Invite students to share their understandings. Encourage elaboration and revisits to the text to clarify if required.

When are the most dangerous times for astronauts? Why?

What happened when Soyuz 1 *was returning to Earth?*

How do you think you would feel if you were an astronaut in this situation?

How might astronauts have died in training?

What happened on Apollo 13?

THE COST OF SPACE TRAVEL

Before Reading

Discuss the graph of the space budget, photos, and captions to build background knowledge. Invite students to infer why the cost of space travel might be so great.

Prompt students to notice the word *corporations* on page 24. Invite students to share their understanding of this word and then check the glossary meaning.

Read these pages and be ready to share what you learn about the cost of space travel.

After Reading

Why does it cost so much to travel into space?

How else could this money be spent?

What is meant by the term budget blow-out*?*

What are some of the ways research into space travel has helped industry and the economy?

ASTRONAUTS OR ROBOTS?

Before Reading

Discuss the photos and captions to build background knowledge. Invite students to predict what this chapter is about. Invite students to infer why robots might be used in place of astronauts.

Prompt students to notice the word *asteroids*. Invite students to share what they know about this word and check the meaning in the glossary.

Read this chapter and find out more about using robots in space.

After Reading

Invite students to share what they know about robots in space.

What are the pros? What are the cons?

RESEARCH IN SPACE

Before Reading

Discuss the photos and captions to build background knowledge. Invite students to predict what some of the research might be about. *What sorts of things do you think scientists want to learn about space?*

Prompt students to notice the words *vacuum* and *commercial*. Invite students to share what they know about the meanings of these words. Check the glossary meanings.

Read these pages and be ready to share what you learn about research in space.

After Reading

What sorts of things do scientists want to learn about space? Why or how could this information be helpful or important?

What are the pros of space research?

What are the cons?

TOURISTS IN SPACE

Before Reading

Discuss the photos and captions to build background knowledge. Invite students to predict why people might want to visit space. *What sorts of people do you think would like to go into space? Do you think it would cost a lot of money to be a tourist in space? Why?*

Read these pages and be ready to share what you learn about tourists in space.

After Reading

What type of space trip can tourists take on SpaceShipOne*? Where did tourists go? Why did it not go into outer space?*

What will happen in 2009? What is Virgin Galactic? What will this company do? What is a reusable spacecraft? What will tourists on these flights experience? How much will passengers pay for this experience?

Would you go? Why/why not?

LIFE ON MARS

Before Reading

Discuss the illustrations, images, and captions to build background knowledge. Invite students to make inferences about life on Mars. Press students to elaborate to give reasons for their thinking. *What may make it hard for people to find out more about Mars?*

Prompt students to notice the words *greenhouse gases* and *microbes*. Invite students to share what they know about the meanings of these words. Check the glossary meanings.

Read these pages and be ready to share what you learn about life on Mars.

After Reading

What are some of the questions scientists have about Mars?

What do scientists see as some of the possibilities for humans on Mars?

What has been learned about Mars?

Are there signs that life could exist on Mars? What are they?

How could life be possible on Mars?

What are the pros? What are the cons?

CONCLUSION

Before Reading

Discuss the images and captions to build background knowledge.

Read these pages and be ready to discuss some of the things people need to think about when they contemplate travel to and life in other parts of space.

After Reading

What are the possible benefits of travel into space? Encourage students to share the pros of space travel.

What are the negatives of travel into space?

Do you think travel in space is an important thing to keep learning about? Why/why not?

CODE BREAKER

Antonyms are words with opposite meanings, such as yes/no, in/out, short/long.

What are the antonyms for these words from the book:

- *lower*
- *manned*
- *safe*
- *cold*
- *inside*
- *live*
- *build*
- *future*
- *expand*
- *important*

Have students choose other words from the book and think of antonyms for them.

MEANING MAKER

Have students brainstorm reasons for governments to continue investing in space research and reasons not to continue investing in space research.

Make two lists. Work through the lists and discuss each reason given. Prompt students to justify their thinking.

TEXT USER

This book uses a discussion to point out the pros and cons of space travel. This makes it easy for the reader to see both sides of the story.

Other things in this book that help the reader to build understandings of this topic are photographs, diagrams, labels, and captions. These give the reader a lot of information about the text.

Discuss the way the illustrations, images, graphs, and other support material have been selected in order to support the discussion in each chapter. How would our understandings be different if these kinds of support material were not included?

TEXT CRITIC

Some information books give just one side of the story. This book is different. Because it is a discussion, this book gives the reader information that shows the advantages and disadvantages of each chapter topic.

How do you think this book would have been constructed if it had been written by:

- *a space tourism company*
- *an astronaut*
- *a research scientist*
- *a person who opposes the idea of space travel?*

USING MULTIPLE INTELLIGENCES

Plan and Write: Plan a campaign to encourage or discourage space travel. Write an argument to support your campaign. (V)

Design: Design a poster with a slogan for your campaign. (S, V)

Share: Share your argument with the rest of the class. (V)

MULTIPLE INTELLIGENCES

The theory of multiple intelligences was developed by Howard Gardner, a professor of education at Harvard University. Howard Gardner's theory suggests that the current view of intelligence, as measured by IQ tests, is far too limited and discriminates against students who think in different ways. He proposes taking a broader perspective and has identified eight different intelligences. These are:

verbal-linguistic intelligence – word smart

logical-mathematical intelligence – number/ reasoning smart

spatial intelligence – picture smart

bodily-kinaesthetic intelligence – body smart

musical intelligence – music smart

interpersonal intelligence – people smart

intrapersonal intelligence – self smart

naturalist intelligence – nature smart

Multiple intelligences have enormous potential as a tool in furthering reading and language development. Traditionally, the teaching of language and reading has focused mainly on two intelligences: logical-mathematical and verbal-linguistic. This means that many students who possess different intelligences do not receive the necessary opportunities, encouragement, instruction, or reinforcement to succeed with reading as well as they might.

Would You Travel in Space?

Name_____

Graphic Organizer (before and during reading)

Record the pros and cons of space travel as you read the text.

Pros	Cons

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Would You Travel in Space?

Name_____

Multiple Intelligences
Intrapersonal, Logical-mathematical

What do you think you would like, dislike, and find interesting about being an astronaut? Record your answers in the table.

Like	
Dislike	
Interesting	

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Would You Travel in Space?

Name _____

Code Breaker

Locate these specialized words in the book and write a sentence using each one.

air pressure

_____

_____

asteroids

_____

_____

astronauts

_____

_____

atmosphere

_____

_____

gravity

_____

_____

microbes

_____

_____

robots

_____

_____

radiation

_____

_____

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Would You Travel in Space?

Name_____

Meaning Maker

For things to work well during space travel, astronauts need to do things in special ways. Use the book to help you to fill in the answers below.

Action	Why?
Strapping in tightly during lift-off	
Forcing the inhalation of air during lift-off	
Eating fruit or vegetables within a few days of lift-off	
Strapping the food tray to themselves or a wall when eating	
Eating the food in a particular order	
Strapping themselves to the toilet	
Washing their hair with a wet cloth	
Attaching the sleeping bag to the wall	
Doing exercise	

Would You Travel in Space?

Name _____

◉ Text User

1. Does the title of the book tell you what it is about? Why/why not?

_____

_____

2. Did the title, cover illustration, and blurb make you want to read this book? Give reasons.

_____

_____

3. What will you remember about this book?

_____

_____

4. Can you relate to this topic? Explain.

_____

_____

5. What was the most interesting part of this book? Give reasons.

_____

_____

6. Did you find the glossary helpful in understanding new words?

_____

_____

7. What sorts of things does a reader need to know in order to find things quickly in a book like this?

_____

8. How did this book help you to learn more about your world?

_____

9. List some things that you know that you didn't know before you read this book.

_____

10. Who do you think would enjoy a book like this? Why?

_____

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Would You Travel in Space?

Name_____

◉ Text Critic

This book is a discussion. The reader gets two sides to the argument about space travel.

1. Do you think the writer presented both sides of the argument equally? Explain.

_____

_____

2. Find two sentences from the book that show the pros of space travel.

_____

_____

_____

_____

3. Find two sentences from the book that show the cons of space travel.

_____

_____

_____

_____

4. Do you think the author would like to travel into space? Give reasons.

_____

_____

5. If you had booked a seat to go into space and then read this book, do you think you would change your mind? Give reasons.

_____

_____

6. Are there any pros that you can think of that the writer did not discuss?

_____

_____

7. Are there any cons that you can think of that the writer did not discuss?

_____

_____

Would You Travel in Space?

Name_____

Discussion

Circle true or false for each of the following statements.

Chapter	Statement	True or False (Circle one)
Introduction	As the shuttle takes off, the crew cabin stays still.	True False
	The shuttle becomes lighter as it burns more fuel.	True False
	There is a countdown to zero before take off.	True False
Why Travel in Space?	There are about 6.6 billion people on Earth.	True False
	By the year 2050, the population could reach 9.4 billion.	True False
	It is very safe to travel into space.	True False
	Astronauts take note of all safety requirements.	True False
	People only go into space for fun.	True False
Life in Space	Life in space is similar to life on Earth.	True False
	Gravity is a problem for astronauts.	True False
	There are no water restrictions in space.	True False
	Astronauts lose a lot of weight in space.	True False
Dangers in Space	There are no dangers in space.	True False
	Spacecraft must be pressurized.	True False
	Fire is one of the biggest dangers in space.	True False
Accidents in Space	So far, there have been no accidents in space.	True False
	Christa McAuliffe was a teacher who won a contest to travel on the shuttle.	True False
	Apollo 13 was damaged by an explosion.	True False