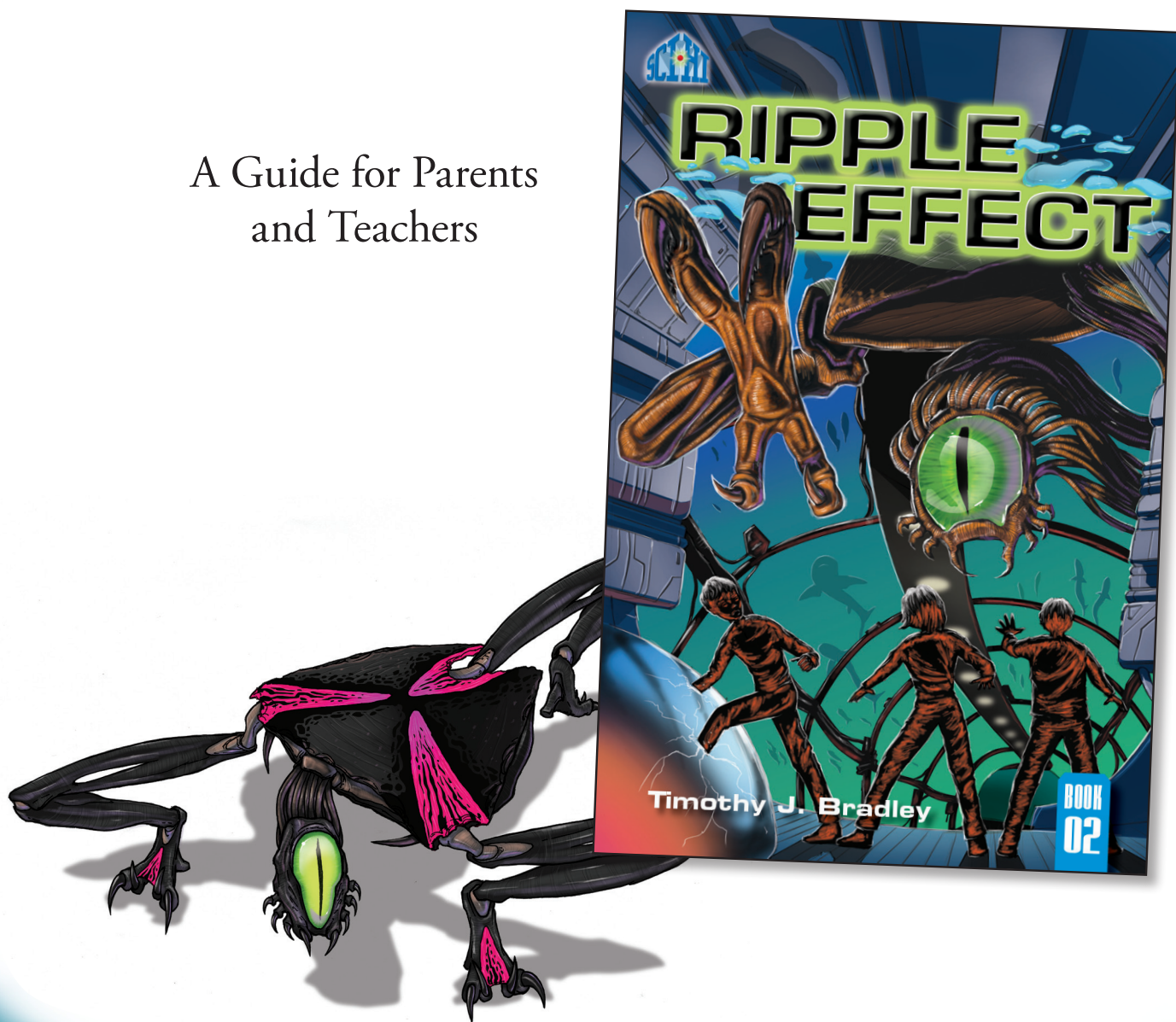


The Real Ripple Effect

A Guide for Parents
and Teachers

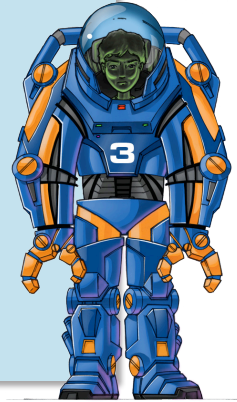


Overview

Sci Hi books present rich opportunities to discuss character development, plot, setting, and themes throughout the text as well as nonfiction elements often found in science fiction (sci-fi). *Ripple Effect* explores the quest for alternative energy sources for Earth and its population. This supplemental guide is designed to help young readers get the most out of the reading experience.

Materials

- *Ripple Effect* by Timothy J. Bradley
- art supplies such as crayons, colored pencils, and markers
- computer and Internet connection



Focus Objectives

- Make and confirm predictions
- Monitor comprehension

Reading Connections

- Comprehension Quiz (pages 3–4)

Vocabulary Connections

- Context Clues (pages 5–6)

Writing Connections

- Sidney's Journal (pages 7–8)

Science Connections

- Researching Alternative Energy Sources (page 9)

Art Connections

- Create Your Own Parallel Universe (page 10)

Answer Key:
1. D
2. A
3. C
4. B
5. A
6. D
7. B
8. C
9. B
10. A
11. D

Reading Connections

Comprehension Quiz

1. According to the Alchemists, what will be the outcome of the scientists' plans for generating energy?
 - A. It could repair the damage done by centuries of pollution, greenhouse gases, and exploitation of Earth's resources.
 - B. The reactor could generate enough energy to power the lights on Goddard Island.
 - C. Stars have used nuclear fusion for billions of years.
 - D. The Earth and mankind would be destroyed.
2. In Chapter 1, what does Sidney's curiosity lead him to do?
 - A. Sidney increases the reactor's power to full strength.
 - B. He gives himself a wedgie with the radiation suit.
 - C. Sidney shuts down the reactor.
 - D. Sidney and Hari insult each other in multiple languages.
3. What is the main advantage of conducting experiments at WAVElab?
 - A. Researchers can listen to music as loud as they want.
 - B. Scientists can watch various types of sea life while they work.
 - C. Researchers can experiment in a secure, controlled environment.
 - D. Researchers can work close to Goddard Island.
4. Which sentence in Chapter 3 foreshadows the events that will happen to the students later in the book?
 - A. *Your mom and dad were physicists.*
 - B. *Somehow, your mom and dad made a window that allowed them to see into other worlds.*
 - C. *They were both scientists on Goddard Island not long after it was first constructed.*
 - D. *Your parents were part of the team that made building the full-scale fusion reactor at WAVElab possible.*
5. Which of the following is NOT an indication that something is wrong when the reactor is ignited in Chapter 4?
 - A. The students see a light show of particle collisions in the reactor.
 - B. The micro black hole in the reactor is putting out ripples.
 - C. A large fish drops into a passageway inside WAVElab.
 - D. The reactor is putting out fluctuating energy levels.
6. *The arms and legs of the suit made ratcheting sounds, and he could feel them constricting tighter around his arms and legs.* What does the word *constricting* mean in this sentence?
 - A. releasing
 - B. being loud
 - C. loosening
 - D. squeezing

Comprehension Quiz (cont.)

7. Which of the following was probably the author's purpose for including a *urine collection system* in each diving suit?
- A. The author wanted to inform readers about the functions of diving suits.
 - B. The author wanted to entertain readers with a funny scene.
 - C. The author wanted to persuade readers to buy diving suits.
 - D. The author wanted to teach readers about what they should do when they wear diving suits.
8. Which action shows that Sidney is a kind and thoughtful character?
- A. He does not tell Hari about seeing his dad in a parallel universe.
 - B. He plays catch in the yard with his father.
 - C. He decides not to enter a parallel universe and stay with his father.
 - D. He fights with Terence.
9. What is likely to have happened if the students had not been able to shut down the reactor?
- A. The reactor would have shut down on its own.
 - B. The ripples of energy produced by the reactor would have continued to alert the alien spider to the students' location.
 - C. The colossal squid would have crushed the reactor.
 - D. The ripples of energy would have caused the reactor to explode.
10. How does Sidney's life change from the beginning of the book to the end?
- A. His curiosity is valued and appreciated.
 - B. He is constantly in trouble.
 - C. He graduates from Sci Hi with honors.
 - D. Sidney and Terence become best friends.
11. Why do you think the author included the epilogue in this book?
- A. The epilogue summarizes everything that happened.
 - B. The epilogue tells what the next Sci Hi book will be about.
 - C. The epilogue gives information about the author.
 - D. The epilogue confirms Sid's vision of a parallel universe where his dad is alive.

Context Clues

When reading text, we often encounter unknown words. Good readers know how to use context clues in the word, sentence, or paragraph to figure out the meaning of the unknown words. Have your student use context clues from the book to define the boldface words in the sentences on the Context Clues Activity (page 6). Then, have your student choose other unknown words that he or she would like to use context clues to define.

Example

The **minuscule** machines were flat, short-legged figures that looked like miniature metal sumo wrestlers, but they were too small to see without a microscope. (p. 25)

Clues: miniature, too small to see

Definition: Minuscule must mean something super tiny and small because the text says the minuscule nanobots could not be seen without a microscope.

Context Clues Activity Name: _____

Directions: Use context clues to define the boldface words below. Note the clues in the excerpt, and then write your own definition of the word.

1. "...we've been proud to partner with such an **elite** group of researchers. The crewmembers on WAVElab are truly at the top of their fields." (p. 35)
Clues: _____
Definition: _____

2. "...the fusion reactor is acting strangely. It's working more or less as we expected, and the power it's generating is actually a bit higher than we thought, but it's also putting out some **fluctuating** energy levels." (p. 72)
Clues: _____
Definition: _____

3. He was **petrified** of the monster but couldn't give in to the part of his brain that screamed, Run and hide! (p. 131)
Clues: _____
Definition: _____

4. Sid lost his grip and **plummeted** straight toward the bubble just as the creature's head broke the surface of the bubble. (p. 137)
Clues: _____
Definition: _____

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Context Clues Activity

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1. "...we've been proud to partner with such an **elite** group of researchers. The crewmembers on WAVElab are truly at the top of their fields." (p. 35)

Clues: _____

Definition: _____

2. "...the fusion reactor is acting strangely. It's working more or less as we expected, and the power it's generating is actually a bit higher than we thought, but it's also putting out some **fluctuating** energy levels." (p. 72)

Clues: _____

Definition: _____

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Clues: _____

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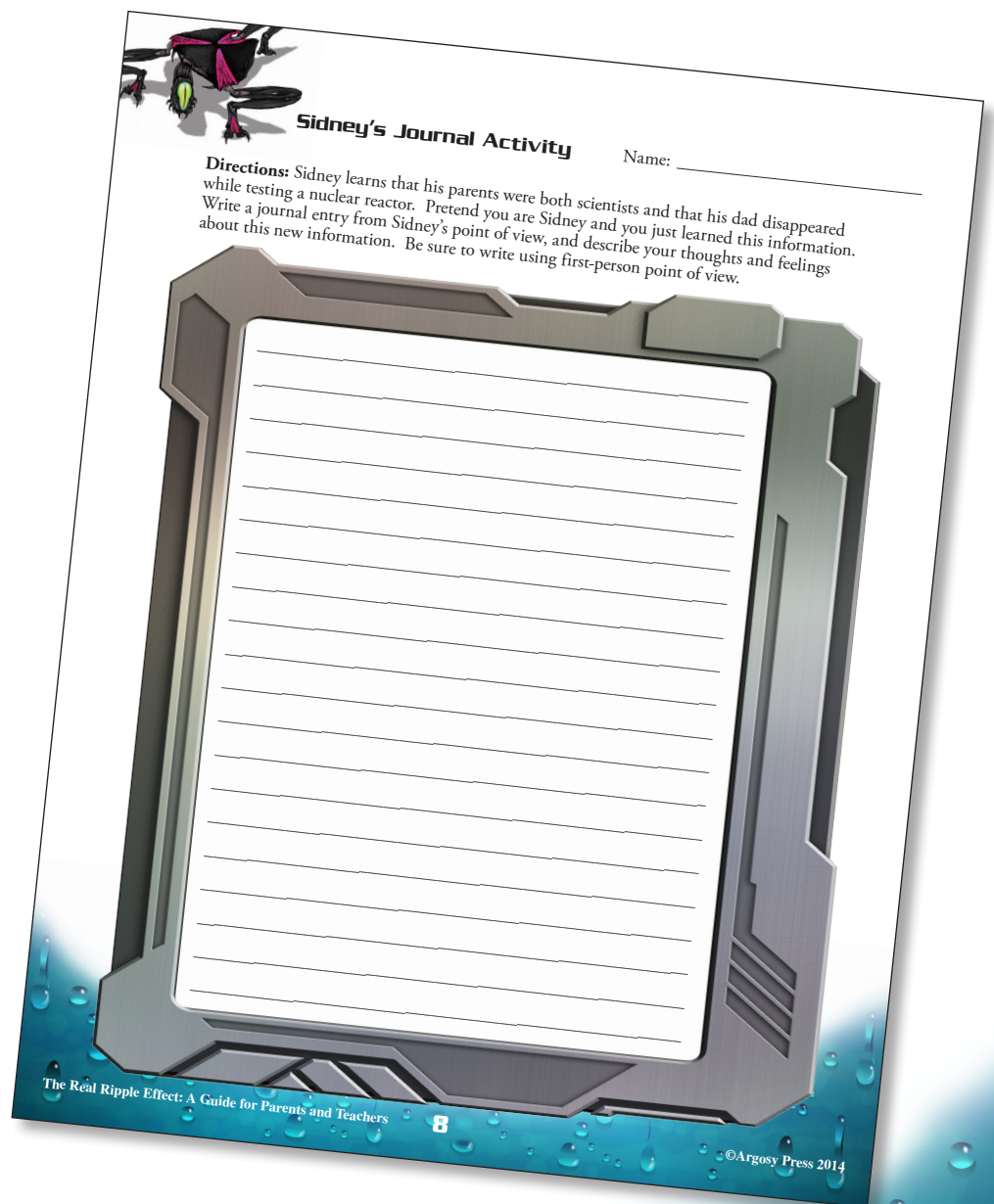
Clues: _____

Definition: _____

Writing Connections

Sidney's Journal

It's important to make connections between characters and a reader's personal experiences. This helps readers stay engaged with the text and understand what a character is experiencing. In Chapter 3, Sidney's uncle Mitch tells him new information about his parents. Have your student write a journal entry from Sidney's point of view (first person) after learning his parents were scientists. Encourage your student to think about what Sidney might be thinking and feeling. Use Sidney's Journal Activity Sheet (page 8) and additional pages, if necessary. Then, talk with your student about the journal entry.





Sidney's Journal Activity

Name: _____

Directions: Sidney learns that his parents were both scientists and that his dad disappeared while testing a nuclear reactor. Pretend you are Sidney and you just learned this information. Write a journal entry from Sidney's point of view, and describe your thoughts and feelings about this new information. Be sure to write using first-person point of view.

A large, stylized journal page with a grey, metallic-looking border and horizontal lines for writing. The page is designed to look like a futuristic or sci-fi journal. The border has various geometric shapes and cutouts, giving it a mechanical appearance. The writing area is a large white rectangle with horizontal lines. The page is set against a background of blue water with bubbles and droplets.

Researching Alternative Energy Sources

The scientists in *Ripple Effect* are experimenting with nuclear fusion to generate energy. The development of clean and renewable energy sources for our planet is a widely researched field. For many years, scientists have explored alternatives to fossil fuels and have looked for energy sources to stop pollution and possibly reverse its effects.

Work with your student to research renewable energy sources. Make a chart listing each source as well as the advantages and disadvantages of using each type of energy. Talk about which source you and your student think is the best alternative.



Create Your Own Parallel Universe

Sidney and his friends discover that the mysterious bubbles found in WAVElab lead to parallel universes. Some of the universes Sid observes are similar to his universe, while others are very different. Have your student imagine that he or she could enter a bubble to any parallel universe and sketch below what he or she would want to see or do there.

