

# UNIT 24 OPENER

## ▶ Preteach: Instructional Terms

**Science fiction** is a story from the writer's imagination, but it is often based on scientific facts and laws of nature. Explain to students that science fiction writers often study science and technology and imagine how these affect society and people's lives. **Ask:** **What books or magazine stories have you read that tell a fiction story about science or technology? Who were the main characters? What made them interesting to you? What did you learn about science or technology?**

A **summary** is a short version of something that has been written or spoken, such as a science fiction story. Explain to students that a summary contains only the main points of the story. When students write a summary of fiction, they should answer these questions: what does the main character want, how does he or she try to solve the problem, and what is the solution?

Explain to students that writers use a point of view to narrate a story. The point of view is the perspective from which a story is told, or the kind of narrator who tells the story. Most stories are told from either the first-person or the third-person point of view. In **first-person point of view**, the narrator is a character in the story who uses the pronouns *I* and *me*. A story told in **third-person point of view** has a narrator who is usually outside the story, knows about the characters' actions, and often reveals the characters' thoughts and feelings as well. Third-person narrators use pronouns such as *he*, *she*, and *they*. Tell students that they will read a science fiction story written in the third-person point of view.

Science fiction stories often use a scientific vocabulary, so students may need to use context clues to decode unfamiliar words. Context clues include choosing the correct meaning for **multiple-meaning words**. These words are spelled alike but have more than one meaning. For example, the word *mold* has three different meanings and can be used either as a noun or a verb.

Tell students that identifying the part of speech for multiple-meaning words can help them narrow the choices for finding the correct meaning in context. Remind students that looking at the sentences around unfamiliar words and reading ahead can also help them decide which meaning of the word is correct.

## ▶ Scope and Sequence at a Glance

**Genre:** Science Fiction

**Title:** Brewing Up Trouble

**Cross-Curricular Connection:** Technology

**Comprehension Strategy:** Summarize

**Comprehension Skill:** Author's point of view—third person

**Vocabulary Strategy:** Dictionary/Glossary (multiple meaning words)

**Decoding Support:** word endings *-sure* (zh/r) as in *measure*; *-ture* (ch/r) as in *culture*

## ▶ Summary of Reading Passage

### *Brewing Up Trouble*

Amos, a boy who has a passion for science, often conducts science experiments in his kitchen. One day when his mother is away, he tries an experiment that goes terribly wrong. He creates a fast-growing mold that threatens to take over the kitchen. Knowing that his mother is on her way home, he cleans up the mess, or so he thinks.

*Lexile: 900*

*Word Count: 837*



## UNIT 24 OPENER (CONT.)

 **Learner Vocabulary**

Introduce the unit's vocabulary words by reading the following sentences aloud. After you read each sentence, repeat the vocabulary word and read aloud its definition.

- bacteria** Noun. Tiny living things that exist around and in the body, some of which can cause sickness or disease.  
Dr. White said that my infection was caused by common **bacteria**.
- extraordinary** Adjective. Amazing or highly unusual.  
Traveling in a hot air balloon must be an **extraordinary** ride.
- mold** Noun. (1) Fungus that grows on old food or in moist areas. (2) Hollow shape in which a liquid or soft substance is placed in order to dry and set. Verb. (3) Shape a substance using the hands.  
(1) Gray-green **mold** was growing on the stale bread.  
(2) Alonzo used the **mold** to make a set of fresh terra cotta bricks.  
(3) Serena molded the clay into the shape of a heart.
- observe** Verb. (1) Watch carefully. (2) Comment or remark. (3) Notice something while watching. (4) Obey or follow instructions. (5) Celebrate, as in a holiday.  
(1) We were very quiet as we **observed** the birds building nests in the trees above us.  
(2) Cherise **observed** that she was too tired to meet me for dinner.  
(3) As my opponent reached for his chess piece, I **observed** a small drop of sweat on his forehead.  
(4) It's polite to **observe** good manners while eating at someone's home.  
(5) Each year, we **observe** Martin Luther King Day on the third Monday of January.
- solution** Noun. (1) Mixture of substances dissolved in a liquid. (2) Answer or explanation for a problem.  
(1) Wear gloves and goggles when cleaning with this toxic **solution**.  
(2) We must work together to find a **solution** to this problem.
- specimen** Noun. Sample used to represent the whole group.  
Maya collected several butterfly **specimens** for her science project.

 **Quick Connect Activities**

Have students make a bulletin board showing pictures of technology that their families use, such as computers, cell phones, televisions, DVD players, and microwave ovens.

 **Destination Journal**

Have students write journal entries on this topic: **Imagine you are a famous scientist. You have been asked to talk about your latest experiment. What is your experiment? Will it help people? How? What do you plan on doing with the results of your experiment?**

 **Book Lists****Books of the Same Genre**

Students who enjoy this genre might choose from these selections for further reading.

**Asimov's Mysteries by Isaac Asimov. 1968. Fawcett Crest.** (Below-level students.) Asimov pens 13 classic science fiction tales. *Lexile: 850*

**Star Split by Kathryn Lasky. 1999. Hyperion Books for Children.** (On-level students.) In 3038, a 13-year-old uncovers a secret plot to save humans from genetic technology. *Lexile: 900*

**Rama II by Arthur C. Clarke. 1989. Bantam Books.** (Above-level students.) The brightest minds on Earth gather to learn about the technology of Rama II, but they are not prepared for what they learn. *Lexile: 970*

**Books with Related Themes**

Students who are fascinated by science and technology may find these books intriguing.

**Antarctic Journey by Jennifer Owings Dewey. 2000. Scholastic Inc.** (Below-level students.) Dewey's diary records her feelings as she explores the frozen continent. *Lexile: 860*

**Messengers, Morse Code, and Modem by Janice Parker. 2000. Raintree Steck-Vaughn.** (On-level students.) This book explores the development of communications technology over time. *Lexile: 920*

**Boomerangs, Blades, and Basketballs: The Science of Sports by Jane Creighton. 2000. Raintree Steck-Vaughn.** (Above-level students.) This book explains the principles of physics involved in various sports. *Lexile: 950*



## LESSON 1 PLANNER

 Genre Study

Assess students' prior knowledge of **science fiction** by asking whether they have read books about space, future technology, or strange environments. Explain that students will be studying science fiction and e-zines, or electronic magazines. Draw two large circles on the board. Label one of them *science fiction* and the other *e-zines*. Ask students to contribute what they know about each category. Lead students to include the following points, and write them in the appropriate circle.

**Science Fiction**

- Authors imagine thrilling views about how science and technology can change life.
- Authors help us imagine how technology can change the way we normally do things.
- Tales can sound true when they are partly based on scientific truths and laws in nature.
- Stories often take place in the future, in space, or in an unknown world or universe.
- Things that are imaginary now might turn out to be real in the future.

**Ask: What kinds of technology were not available when your parents were your age? Your grandparents? How has technology made your life different from those of your parents and grandparents?**

**E-zines**

- are electronic magazines.
- contain articles and stories similar to those in printed works.
- often give links to related Web sites.

Point out that the technology for e-zines did not exist when your grandparents were your age. **Ask: How are e-zines different from print magazines?**

Explain that students will also learn to recognize

- features of science fiction texts.
- the author's purpose in writing science fiction.
- that science fiction writers often use third-person point of view.

 Build Background

Biology is a life science that studies plants, humans, animals, insects, and microscopic organisms visible only through a microscope. With a simple microscope and slides, students can look at microscopic biological subjects on their own. A drop of pond water on a slide contains many microscopic organisms. The slide show focuses on biology lab equipment and what is needed for a beginner setting up a lab at home.

 Learning Objectives

- Recognize distinguishing features of science fiction texts.
- Recognize the author's purpose in writing science fiction texts.
- Learn the meanings of grade-level and content vocabulary words in context.
- Use a dictionary to determine the appropriate definition of a multiple-meaning word in a sentence.
- Write sentences using multiple-meaning words and grade-level vocabulary.

 QuickFact: Biology

The word *biology* is formed from the Greek word *bios*, which means "life," and the suffix *-logy*, meaning "science of," or "knowledge of." The word *biology* was introduced independently by three different scientists at about the same time: Karl Friedrich Burdach in 1800 and Gottfried Reinhold Treviranus and Jean-Baptiste Lamarck in 1802.



## LESSON 1 PLANNER (CONT.)

## Lesson 1: Genre and Vocabulary Study

### Vocabulary Strategy: Multiple-Meaning Words

Students are told that multiple-meaning words are words that are spelled alike, but have different meanings. In the courseware, students will

- Learn the meanings of grade-level and content vocabulary words in context.
- Use a dictionary to determine the appropriate definition of a multiple-meaning word in a sentence.
- Write sentences using multiple-meaning words and grade-level vocabulary.

Remind students that sometimes a word can change its part of speech as well as its definition. For example, a play has an act. The word *act* is a noun in this usage. Someone can also act in a play. In this usage, the word *act* is a verb.

### Differentiated Instruction

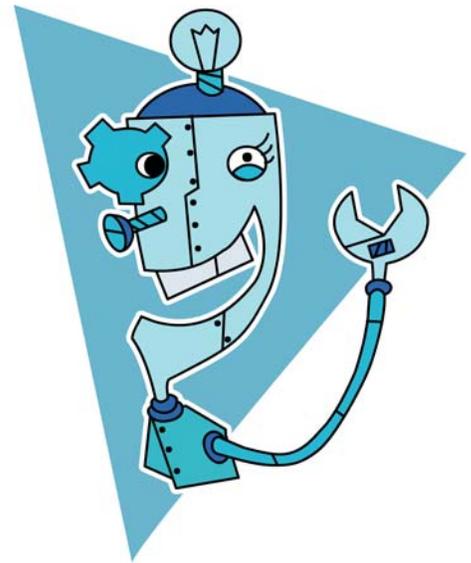
**ELL:** Ask students to make a list of multiple-meaning words they find in the reading passage. Have them write the sentence in which they find each word. Then have students use context clues to understand the word's meaning.

**Special Needs:** Suggest that students form mental pictures of words with multiple meanings, such as *key*, *second/seconds*, and *solution*. For example, for the word *mold*, students could picture a liquid being poured into an ice cube tray. For a different kind of *mold*, students could picture a green, bumpy substance.

**Above-level Students:** Have students select a science fiction book from the library and prepare an oral book report to the class. Students should tell from which author's point of view the story is told.

### Quick Connect Activities

Have students use the library or Internet resources to find a science fiction story. Remind students to follow the school or district acceptable use policies set for Internet access to ensure content accessed online is appropriate. Tell students to write the title, author, and publisher or URL for the story at the top of a sheet of paper. Then have students identify the point of view in the story and write a summary of the plot. Ask students to list three multiple-meaning words found in the story.



### Destination Journal

Have students write journal entries about how and why science and technology are important in their lives.

### Lesson Resources: Assessment Toolkit

Check the **Practice** and **Apply** activities in this lesson for results you can assess.

Before students take the lesson tests provided in the courseware, check their confidence in the skills:

- Have students work in groups of three or four to write the characteristics of science fiction and e-zines.
- Have students use the vocabulary words by writing a one-page science fiction story about biology.
- Provide students with a list of multiple-meaning words. Have them use the dictionary to find all meanings of each word.

## LESSON 2 PLANNER

 **Comprehension Skill: Author's Point of View—Third Person**

Remind students that stories always have a point of view. Students will learn to

- Recognize that authors write with different points of view, such as first-person or third-person.
- Identify the characteristics of third-person point of view in science fiction.

Third-person point of view has these characteristics:

- Sentences do not begin with I; instead, writers use the characters' names and the pronouns "he" and "she."
- Narrators generally reveal the thoughts, feelings, and observations of the characters.
- Sometimes, third-person narrators are observers who seem to know what everyone is thinking and doing.

Remind students that they can always tell which point of view a story uses by paying attention to the pronouns.

Write two or three sentences on the board, using first-person and third-person pronouns. **Ask: Which of these use first person? Which use third person?**

 **Comprehension Strategy: Summarizing**

Summarizing is a strategy that lets the reader describe a story quickly. A summary may be only a few sentences.

Tell students to ask key questions to summarize fiction:

- What is the main character's goal?
- How does the main character try to achieve the goal?
- What is the outcome?

 **Differentiated Instruction**

**ELL:** Have students use the key questions after sections of the story to summarize it.

**Special Needs:** Have students draw a picture of something from the reading passage. Beneath the picture, have them write the lines that explain the picture. Post the pictures in the room.

**Above-level Students:** Ask a science teacher to help these students to perform an experiment similar to the one that Amos performs in the story. Ask each student to write a lab report of the experiment. Invite volunteers to share their lab reports with the class. **Ask: How scientific was the information in the story?**

 **Learning Objectives**

- Recognize that authors write with different points of view in fiction texts.
- Identify characteristics of third-person point of view in science fiction texts.
- Recognize that the purpose of summarizing text is to improve reading comprehension.
- Identify the best summary of a section of a science fiction text.

 **Assessment: Toolkit**

Check the **Practice** activities in this lesson for results you can assess.

Before students take the lesson tests provided in the courseware, check their confidence in the skills:

- Have students work in pairs. Provide each pair with three or four different short fiction reading passages, and have partners summarize the passages.
- Have students work in pairs to write a one-page science fiction story from the third-person point of view.
- Provide students with a list of five multiple-meaning words. Have students find the meanings in the dictionary, and then write one sentence for each meaning of each word.

## LESSON 3 PLANNER

 Story Summary

"Brewing Up Trouble" is a science fiction story about Amos, a young scientist who enjoys creating and conducting science experiments. Amos has known since he was five years old that he was destined to be a scientist. His first clue was when he got his first wheelchair and began pondering ways to make the chair's wheels spin faster and the brakes grab harder. By the time Amos enters middle school, he has earned top honors in every science fair.

The story begins as Amos is experimenting just for fun. He chooses a cheese that smells like old sneakers and has green mold around the edges. Amos pours a mixture of seaweed extract and gelatin into a Petri dish. After the gelatin hardens, he puts green mold on top, covers it, and puts it into the microwave oven on low, hoping the warmth will make the mold grow faster. He also wants to know how microwaves will affect his experiment.

When Amos looks at the mold under a microscope, he finds that the cells didn't die. In fact, they are moving around the slides like skaters on ice. In his *Experiments Log*, Amos writes, "Rapid increase in number."

Amos returns the Petri dish to the microwave and sets the timer for 10 more seconds. The cells are now much larger and smellier, and they keep growing and multiplying!

Amos's mother is due home any minute, so Amos terminates the experiment. He soaks a dishtowel in vinegar and wheels around the kitchen, cleaning up the escaped organisms. Although the kitchen is spotless by the time his mother comes home, it has a peculiar smell—and something is moving behind the refrigerator.

 Destination Journal

Have students write journal entries on this topic: **If you could be any scientist in history, who would you be? Explain why you would choose to be this scientist. Did he or she help save people's lives? Make a vaccine that helped animals? Invent a way to help people in wheelchairs? Find a way to help the environment?**

 Learning Objectives

- Read a science fiction text to build vocabulary, fluency, and comprehension.
- Summarize after every chapter while reading a science fiction text to improve comprehension.
- Recognize third-person point of view while reading a science fiction text.
- Use a dictionary while reading a science fiction text to determine the meanings of multiple-meaning words.
- Demonstrate comprehension of a science fiction text.

 Assessment: Toolkit

Use the **Comprehension Quiz** to assess students' understanding of the passage.

Before students take the lesson tests provided in the courseware, check their confidence in the skills:

- Provide students with passages written from different points of view. Have students identify the passages written in third person.
- Have students write a letter to younger students that explains multiple-meaning words and the way that a reader can determine the appropriate meaning by noting how the word is used in the text. Suggest that they give examples.

## LESSON 4 PLANNER

### ▶ Comprehension Skill: Author's Point of View—Third Person

After students read "Brewing Up Trouble," ask: **In what point of view is this story written? What words tell you that the narrator is not in the story?** If students are not sure, remind them that the narrator refers to Amos as he. **Ask: What is the main purpose of the story?** (To entertain.) **Ask: Why do you think the author chose the third-person point of view? How might the story have been different if Amos had told the story?** (Refer students to the end of the story.) **Ask: As the story ends, does the narrator know anything that Amos does not know?**

Discuss with students that in the first-person point of view, the reader knows how the main character thinks and feels because that character is usually telling the story. Explain that a first-person narrator may not always be objective or know everything that a third-person narrator knows. **Ask: How can you tell how Amos feels and what he likes in this story?** Remind students that the third-person narrator tells the reader that Amos likes science. The narrator reports that Amos knows he has to clean up before his mother comes home. Point out that the narrator also helps readers learn about a character's likes, dislikes, and feelings by reporting what the character says and does. Then readers make inferences from these clues.

### ▶ Comprehension Strategy: Summarize

After students read "Brewing Up Trouble," ask: **What was the main character's goal? How did the main character try to achieve the goal? What was the outcome?**

Remind students that the answers to these key questions will be a summary of the story's most important points.

### ▶ Differentiated Instruction

**ELL:** Have students rewrite the opening paragraphs of "Brewing Up Trouble" in the first-person point of view.

**Special Needs:** Have students read the story aloud to a partner. Remind partners to practice being a good listener.

**Above-level Students:** Have students write a one-page science fiction story from the first-person point of view, and then have them rewrite the story from the third-person point of view.

### ▶ Learning Objectives

- Analyze third-person point of view in a science fiction text.
- Identify the key characteristics of a good summary of a science fiction text.
- Write a summary after reading a science fiction text.

### ▶ Assessment: Toolkit

Check the **Practice** and **Apply** activities in this lesson for results you can assess.

Before students take the lesson tests provided in the courseware, check their confidence in the skills:

- On note cards, write several multiple-meaning words with which students are familiar. Organize the class into two teams. Have a member from Team One draw a card and tell one of the meanings of that word. A member from Team Two then suggests another meaning for the same word. Each correct answer gets a point for the corresponding team. Team Two then draws a card and the game continues.
- Have students work in pairs to write a half-page summary of "Brewing Up Trouble."
- Have students work in pairs to write three questions they should ask when summarizing fiction.



UNIT 24: Brewing Up Trouble

Name: \_\_\_\_\_ Date: \_\_\_\_\_

 **Comprehension Strategy: Using a Chain-of-Events Chart**

**Directions:** You have learned that summarizing involves identifying the most important events in a narrative. As you begin your summary, use the **Chain-of-Events Chart** below to help you identify the main character's goal, what the main character did to achieve the goal, and the outcome of the main character's efforts.

**Title:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_