

About the Book

Text Type: Nonfiction/Descriptive Page Count: 16 Word Count: 1,088

Book Summary

Do you like to look at the night sky and think about what is out there in the universe? If so, you would enjoy *A Visit to Kitt Peak*. This book tells about the world's largest observatory, which is located outside of Tucson, Arizona. Readers will learn about the specialized telescopes at Kitt Peak and the work scientists do there. The text concludes with tips for stargazing at home.

About the Lesson

Targeted Reading Strategy

- Visualize

Objectives

- Use the reading strategy of visualizing to understand text
- Analyze author's purpose in the text
- Understand the use of possessive nouns
- Use a dictionary to confirm meaning of content words

Materials

Green text indicates resources available on the website

- Book—*A Visit to Kitt Peak* (copy for each student)
- Chalkboard or dry erase board
- Student dictionaries
- Visualize, possessive nouns, dictionary worksheets
- Discussion cards



Indicates an opportunity for students to mark in the book. (All activities may be demonstrated by projecting book on interactive whiteboard or completed with paper and pencil if books are reused.)

Vocabulary

- **Content words:** *amateur, astronomer, constellations, image, observatory, reflected light, telescopes, trolley, windbreak*

Before Reading

Build Background

- Show photographs of stars and planets to students. Ask how they think these pictures were taken.
- Ask students if they own, or have ever looked through, a telescope. Discuss the purpose of a telescope.

Preview the Book

Introduce the Book

- Give students their copy of the book. Guide them to the front and back covers and read the title. Have students discuss what they see on the covers. Encourage them to offer ideas as to what type of book it is and what it might be about.
- Show students the title page. Discuss the information on the page (title of book, author's name).

Introduce the Reading Strategy: **Visualize**

- Explain to students that good readers often visualize, or create pictures in their mind, while reading. Visualizing is based on what a person already knows about a topic, and the words the author uses. Explain that one way to visualize is to draw a picture.
- Read page 4 aloud to students. Model how to visualize.
Think-aloud: Whenever I read a book, I always pause after a few pages to create a picture in my mind of the information I've read. This helps me organize the important information and enjoy what I'm reading. When I read about the Kitt Peak National Observatory, I pictured a large telescope at the top of a large mountain. I pictured how clear and dark the skies look from atop the mountain.
- Reread page 4 aloud to students. Ask them to share what they visualize as they listen to the page read aloud. Write their descriptions on the board.
- Point out to students that even though their mental pictures about the page may not be the same, they were each able to create a picture in their mind.
- As students read, encourage them to use other reading strategies in addition to the targeted strategy presented in this section.

Introduce the Comprehension Skill: **Author's purpose**

- Write the following terms on the board: *inform, entertain, persuade*. Invite students to share what they already know about the meaning of each word.
- Define each word for students and write the definitions on the board (*inform*: give someone information about something; *entertain*: to amuse someone; *persuade*: to try to make someone think the same way you do).
- Ask students if they can think of an example of each of these purposes from their recent reading. If needed, give examples, such as a fable, a social studies or science book passage, and an advertisement.
- *Think-aloud: Authors write for different reasons. Some write to provide facts about something. For example, a passage from the social studies book might provide me with information about _____. Advertisements use words and pictures to persuade people to buy things. Sometimes authors intend more than one purpose for their writing. The fable The Fox and the Crow, entertains readers with a story of how a fox tricks a crow into dropping a piece of cheese in the fox's mouth. However, the author also uses the story to inform readers of a moral, or lesson, at the end: do not trust flatterers.*

Introduce the Vocabulary

- Write the following words from the content vocabulary on the board: *amateur, astronomer, constellations*.
- Give pairs or groups of students several pieces of blank paper. For each word, have them write or draw what they know about the word. Have groups discuss and create a definition for each word using prior knowledge.
- Review or explain that the glossary and dictionary contain a list of vocabulary words and their definitions.
- Model how students can use the glossary or a dictionary to find a word's meaning. Have students locate the glossary at the back of the book. Invite a volunteer to read the definition for *amateur* in the glossary. Have students compare the definition with their prior knowledge of the word.
- Have students follow along on page 4 as you read the sentence in which the word *amateur* is found to confirm the meaning of the word. Repeat this process with the remaining vocabulary words.


Set the Purpose

- Have students read to find out about Kitt Peak Observatory, stopping after each section to mentally visualize what they read and reflect on the author's purpose.

During Reading

Student Reading

- **Guide the reading:** Have students read to the middle of page 6, where the introduction ends. Encourage those who finish early to go back and reread. Introduce and explain the **visualize worksheet**. Have students draw on their worksheet what they visualized as they read.
- **Model visualizing.**
Think-aloud: When I read page 5, I pictured the narrator standing atop the mountain, looking down at the city of Tucson. I pictured the twinkling orange lights of the city dotting the darkness. Creating a picture in my mind helps me to experience the story with the author, as if I were there.
- Invite students to share the visualization they drew. Ask them to tell how their visualization helped them better enjoy the story.
- Review the events that happened so far in the story. Discuss what might be the author's purpose for writing the story. Write the examples on the board as students share them. (For example: the story *entertains* readers through the descriptions of the setting and the observatory; the story *informs* readers by providing information about the location and purpose of the observatory.)
- **Check for understanding:** Have students read to the end of page 9. Ask them to draw on their worksheet what they visualized as they read.
- Ask students to share what they visualized and how this helped them better enjoy the story. Invite them to share which words in the text helped them create the picture(s) in their mind.
- Review the events of the section titled "Solar Telescope." Discuss how the events of this section support one or more of the three purposes for writing.
- Have students read the remainder of the book. Remind them to stop after every few pages and visualize what they read. Invite them to draw more sketches on their visualize worksheet as they read.

 Have students make a question mark in their book beside any word they do not understand or cannot pronounce. Encourage them to use the strategies they have learned to read the words and figure out their meanings.


After Reading

- Ask students what words, if any, they marked in their book. Use this opportunity to model how they can read these words using decoding strategies and context clues.

Reflect on the Reading Strategy

- Have students share any other sketches they made while reading. Ask how using the strategy of visualization helped them understand and enjoy what they read.
- *Think-aloud:* When I read the description of the telescope building on page 11, I pictured a building so tall that I would have to stretch my neck all the way back in order to see the top of it. At the top of the building, I pictured a large opening with a round, cylindrical telescope poking out.
- **Independent practice:** Have students complete the visualize worksheet. If time allows, have students share and explain their pictures when finished.

Reflect on the Comprehension Skill

- **Discussion:** Review the three reasons why authors write (to *inform*, *entertain*, or *persuade*). Ask students what they think the author's purpose was for writing this book (to *inform*).
-  **Independent practice:** Have students mark with an / in the margin examples in the book where the author informed readers.
- **Enduring understanding:** In this story, you learned about some of the largest and most powerful tools we have to study the universe. Now that you have read this book, why do you think humans develop tools to help us see and learn about outer space?

Build Skills

Grammar and Mechanics: Possessive nouns

- Ask several students to tell you something that belongs to them. Write a sentence on the board or chart paper using the possessive form of their name. For example, *I see Maria's coat on the floor.*
- Circle the 's in each sentence. Explain to students that *possessive nouns* are formed by adding 's or just an apostrophe to the end of a word. Explain that a possessive noun shows ownership, meaning that something belongs to someone.
- **Check for understanding:** Have students turn to page 11 and point to the words *Jupiter's spot*. Ask a volunteer why *Jupiter* has an 's at the end. Then have students point to the words *rings of Saturn*. Have students tell how to turn this phrase into a possessive (*Saturn's rings*).
- **Independent practice:** Introduce, explain, and have students complete the [possessive nouns worksheet](#). If time allows, discuss their responses.

Word Work: Dictionary skills

- Write the content word *observatory* on the board. Ask students to turn to pages 3 and 4. Say: *The illustration on page 4 shows us Kitt Peak. By reading the information and using the photograph on page 3 as clues, we can determine the meaning of observatory (a building or set of buildings where telescopes are kept). If we want to check to be sure of the meaning, we need to look up the word in a dictionary.*
- Pass out student dictionaries. Explain to students that to look up a word, we use the first letter in the word. In this case, the word starts with an o. Ask students if the letter o is in the first half or the second half of the alphabet (second half).
- Remind or explain that guide words are the words at the top of each page in a dictionary. They show the first and last entry words in alphabetical order on a page. Explain and model how to use the guide words to help find the page on which the word *observatory* can be found. Depending on students' experience, model alphabetizing to the second or third letter if necessary. Once *observatory* is located, ask students to identify the guide words on the page.
- Review or explain to students that a dictionary lists the definitions of the entry word and that a definition is sometimes followed by a sentence using the entry word. Ask students to read the definition and sentence for the entry word *observatory* and decide which definition explains how the word is used in the book. Remind students that words often have more than one meaning, and that they must decide which definition matches the usage in the book.
- **Independent practice:** Introduce, explain, and have students complete the [dictionary worksheet](#). If time allows, have students discuss their answers.

Build Fluency

Independent Reading

- Allow students to read their book independently. Additionally, partners can take turns reading parts of the book to each other.

Home Connection

- Give students their book to take home to read with parents, caregivers, siblings, or friends. Have them share their visualization sketches with someone at home.

Extend the Reading

Descriptive Writing Connection

Review examples of descriptive words and phrases used to tell about the Kitt Peak Observatory. Show students various examples of travel brochures. Point out the types of descriptive language used in each brochure. Then ask students to work in pairs to design a travel brochure for a location.

Science Connection

Have students review page 14 of the book to recall what the author said about star charts. With supervision, have students use a search engine on the computer (Google, Yahoo!igans, and so on) to find a star chart. Have them print it out and use it to locate a planet or constellation in the night sky.

Skill Review

Discussion cards covering comprehension skills and strategies not explicitly taught with the book are provided as an extension activity. The following is a list of some ways these cards can be used with students:

- Use as discussion starters for literature circles.
- Have students choose one or more cards and write a response, either as an essay or as a journal entry.
- Distribute before reading the book and have students use one of the questions as a purpose for reading.
- Cut apart and use the cards as game cards with a board game.
- Conduct a class discussion as a review before the book quiz.

Assessment

Monitor students to determine if they can:

- consistently demonstrate the reading strategy of visualization to better understand and enjoy the information in the book during discussion and on a worksheet
- identify author's purpose during discussion using evidence from the text
- correctly identify possessive nouns in text and translate phrases into possessive nouns on a worksheet
- accurately demonstrate the correct usage of a dictionary and write definitions on a worksheet

Comprehension Checks

- **Book Quiz**
- **Retelling Rubric**