

About the Book

Text Type: Nonfiction/Informational Page Count: 16 Word Count: 1,467

Book Summary

What weighs 150 pounds, is sixteen feet long, and can swallow a small deer whole? The answer is a Burmese python, and it may live closer to you than you think. Burmese pythons are native to India and South Asia . . . so what are they doing in Florida? The introduction of this invasive species has already upset the fragile ecosystem of the Florida Everglades. Now scientists are trying to figure out how to stop them from spreading any farther.

About the Lesson

Targeted Reading Strategy

- Ask and answer questions

Objectives

- Ask and answer questions to understand text
- Identify main idea and details
- Recognize and use complex sentences
- Read and understand number words

Materials

Green text indicates resources are available on the website.

- Book—*Invasion of the Pythons* (copy for each student)
- Chalkboard or dry-erase board
- World map
- Highlighters or markers
- Ask and answer questions, complex sentences, number words worksheets
- Discussion cards



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

Vocabulary

*Bold vocabulary words also appear in a pre-made lesson for this title on VocabularyA-Z.com.

- Content words:

Story critical: **competition** (n.), **ecosystem** (n.), **invasive species** (n.), **native** (adj.), **python** (n.), **reproduce** (v.)

Enrichment: **adapting** (v.), **food chain** (n.), **population** (n.), **predators** (n.), **suffocates** (v.), **transmitters** (n.)

Before Reading

Build Background

- Write the word *Snakes* on the board, and ask students what they know about snakes. Record some of their responses on the board. If not mentioned by students, tell them that snakes can be divided into groups, or types: venomous or non-venomous and vipers or constrictors. Discuss the differences.

Lesson Plan *(continued)*

Invasion of the Pythons

- Show students a map of the world, and point out Florida in North America. Explain that there has been an explosion in the population of Burmese pythons (a type of constrictor) in this area. Point out India and South Asia on the map, and explain that this is the Burmese python's native territory. Ask students how they think the Burmese pythons got to Florida.

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 (genre, text type, and so on) and what it might be about.
- Show students the title page. Discuss the information on the page (title of book and author's name).

Introduce the Reading Strategy: **Ask and answer questions**

- Explain to students that engaged readers help themselves to understand what they are reading by asking questions before, during, and after reading. Discuss with students how interacting with the text by asking questions will help them understand and remember what they read.
- Read page 4 aloud with students. Point out that the page ends with a question about the Burmese pythons: *What are they doing in Florida?*
- **Think-aloud:** *After reading the Introduction, I see that the author has provided us with a question to start our thinking: What is the Burmese python doing in Florida, if its native territory is India and South Asia? I'm going to write this question on the board for us to come back to when we finish reading. I can also use the table of contents to think of more questions I would like to have answered about this python invasion. For example, the second section is titled "Who Invited This Guy?" I wonder if people actually brought pythons to Florida? Why? Before I read, several questions often come to mind about the topic. As I read, I enjoy looking for answers to my questions, which often sparks further curiosity and questions to answer.*
- Create a chart on the board similar to the ask-and-answer questions worksheet. Write your questions from the Think-aloud on it. Distribute the [ask-and-answer-questions worksheet](#) to students. Ask them to think about the title of this section and to scan pages 5 and 6, then have them write a question in the first section on their worksheet. Invite them to share some of their questions, and write them on the class chart.
- As students read, encourage them to use other reading strategies in addition to the targeted strategy presented in this section.

Introduce the Comprehension Skill: **Main idea and details**

- Explain that sometimes the amount of information about a topic is so large that it is grouped into sections, and each section of the book has its own main idea.
- Reread the section titles in the table of contents together. Explain to students that they will be learning how to identify main ideas in the book from what they read as a strategy for understanding and remembering the content of the book.
- Model using the table of contents to infer supporting details in the text.
Think-aloud: *When I look at the table of contents on page 3, I see that the word Threats is part of a section title. I already know that I will be reading about pythons, so what happens when pythons are found in certain areas is probably a supporting detail in the book. When I read, I know I will find out even more details about pythons. As I read, I will pause after every few pages to review in my mind the important details. This strategy will help me to identify the main idea of each section. I know that engaged readers do this when they read, so I am going to look for supporting details as I read this book.*
- Ask students to highlight important details in each section as they read.

Introduce the Vocabulary

- Introduce the story-critical vocabulary words listed in the vocabulary section of this lesson.
- Turn to the glossary on page 16. Read the words and discuss their meanings aloud.

Lesson Plan *(continued)*

Invasion of the Pythons


- Remind students of the strategies they can use to sound out words they don't know. They can look for root words, prefixes and suffixes, and semantically related words. For example, say: *If I did not know the meaning of invasive species, I could think about a related word that sounds like invasive: invade. I know invade means to take over in a hostile way, so invasive species probably refers to how the pythons took over other species in the Florida Everglades.*
- Students can also use the context to work out the meanings of unfamiliar words. For example, say: *I could read the definition in the glossary of invasive species, but I could also turn to the page it's found on and read the words and sentences around it. When I read page 5, I can see that the phrase must mean when a new species multiplies and takes over because there is no competition or predators.*
- Review the correct pronunciation for the multisyllabic words in the glossary.

Set the Purpose

- Have students read to find out more about the python invasion in Florida. Encourage students to ask and answer questions while reading.

During Reading

Student Reading

- **Guide the reading:** Have students read from page 5 to the end of page 6. Encourage those who finish early to go back and reread. Ask students to go back and look at their ask-and-answer-questions worksheet and see if this part of the text answered their question.
 - Model answering a question and filling in the second section of the ask-and-answer-questions chart on the board.
Think-aloud: *Before reading this section, some questions came to mind. I wondered, on the basis of the title of this section, if anyone had brought pythons to Florida. While reading, I discovered animals can accidentally move to new lands by getting onto ships. This has been a problem because the new species can take over a new environment if there are no predators. On page 6, I found the answer to our first question: Nobody knows for sure how pythons got to Florida. I also found the answer to my question for this section: People may have brought pythons to Florida, probably as pets. I will write these answers on the ask-and-answer-questions chart on the board.*
 - Ask students to write answers to their question(s) on their ask-and-answer-questions worksheet. Invite them to share the information they learned and the questions they answered as they read this section.
 - Review with students that the title heading of each section can be a clue to the main idea for that part of the book. Have students read pages 7 and 8. Remind them to highlight important details in this section as they read. Say: *The title of this section is "Threats by the Thousands." It makes me think that the main idea has something to do with the danger to animals living in the Florida Everglades.* Ask students to review the details that they highlighted and use them to generate a main idea of the section. (Thousands of Burmese pythons threaten the Everglades.)
 - **Check for understanding:** Have students read to the end of page 13. Review the details that are important in the section titled "An Everglades Nightmare." Then have students work with a partner to generate a main idea for the section.
-  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 each word and figure out its meaning.


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

- Reinforce that asking questions before and during reading, and looking for the answers while reading, keeps readers interested in the topic. It also encourages them to keep reading to find answers to their questions and helps them understand and enjoy what they read.
- **Think-aloud:** *Before reading, I wanted to know how Burmese pythons got to Florida. I now know that nobody knows for sure how they got there, but scientists are working hard to figure it out and how to control them before they destroy the Everglades ecosystem.*
- **Independent practice:** Point out to students that all of their questions may not have been answered in this text. Brainstorm other sources they might use to locate additional information to answer their questions (websites, books, and so on). Invite students to write one more question they still would like to know about pythons in Florida. Ask students to share questions they added.

Reflect on the Comprehension Skill

- **Discussion:** Discuss with students how stopping to review the important details helped students remember facts and better understand the information in each section.
-  Have students review the important details they highlighted in the section titled “Fighting Back” and use them to write a main idea for this section.
- Discuss the main idea and supporting details of the book as a whole. Write these on the board.

Build Skills

Grammar and Mechanics: **Complex sentences**

- Write the following sentence on the board: *For millions of years, the movement of animals and plants was limited by natural barriers.*
- Underline *the movement of animals and plants was limited by natural barriers*. Explain that this part of the sentence is called the *independent clause* because it is a complete thought, or sentence. Circle *For millions of years*. Explain that this part of the sentence is called the *dependent clause*. Point out that the dependent clause does not express a complete thought and is not a sentence that can stand alone. When we join an independent clause and a dependent clause, it is called a *complex sentence*.
- Review or explain to students that a *conjunction* is a word that joins together the two parts of a complex sentence. When joining an independent and dependent clause together (like the example), a special conjunction called a *subordinating conjunction* must be used. Circle or underline the word *For*, and explain to students that it is the subordinating conjunction. List the following examples of subordinating conjunctions on the board (*as, as if, before, after, because, though, even though, while, when, during, since, until, unless, where*).
- Explain to students that complex sentences are often formed by putting the subordinating conjunction at the beginning of the sentence, followed by the dependent clause. Have students read the sentence again, as you point out the subordinating conjunction, the dependent clause, and the independent clause. Review or explain that when the dependent clause is at the beginning of the sentence, a comma often separates the clauses.
- Write the following sentence on the board: *By the 1800s, many humans moved to new lands.*
- Have students identify the conjunction (*By*), the dependent clause (*the 1800s*), and the independent clause (*many humans moved to new lands*).
- Point out that in this example, the dependent clause is again at the beginning of the sentence.



Check for understanding: Have students highlight the following sentence on page 5 in their book: *On the island of Guam, the brown tree snake has wiped out much of the bird population.* Have students underline the dependent clause (*On the island of Guam*) and circle the independent clause (*the brown tree snake has wiped out much of the bird population*). Ask students to identify the conjunction (*On*).

- **Independent practice:** Introduce, explain, and have students complete the [complex sentences worksheet](#). If time allows, discuss their responses.

Word Work: Number words

- Explain that when reading aloud, readers will sometimes encounter different symbols, numbers, and abbreviations within the text and its graphic features. Effective readers read these parts of the text fluently, just as they read the words.
- Direct students to page 4. Ask them to find the numbers in the text (16; 4.9; 150; 68). Review or explain that the numbers are called *cardinal numbers* and that they are used to *describe an amount, a date, or a time*. Point out that a cardinal number is read in the same manner as the written word for the number. Practice reading the numbers and symbols aloud (*sixteen, four point nine, one hundred fifty, sixty-eight*). Write out the words next to the number on the board.
- Write the numbers from the text box on page 6 on the board and have volunteers come to the board and write their word equivalents (*two, point six, twelve, three point seven, two thousand twelve*).
- **Check for understanding:** Have students turn to page 8. Ask them to find the numbers in the text, and have volunteers read them aloud. Write the numbers on the board and ask other volunteers to come up to the board to write their word equivalents.
- **Independent practice:** Introduce, explain, and have students complete the [number words worksheet](#). Discuss the answers aloud after they are finished.

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 students demonstrate how a reader asks questions, and then reflects on the answers while reading.

Extend the Reading

Informational Writing and Art Connection

Provide print and Internet resources for students to further research Burmese pythons or other constrictors. Citing information from their research and the book, have them create a short report or small poster with at least three sections, such as life cycle, size, diet, habitat. If students wish, they can include a section on how and why they are thriving in the Florida Everglades. Encourage them to add an illustration or photograph to their poster. Require an error-free final copy.

Visit WritingA-Z.com for a lesson and leveled materials on informational writing.

Science Connection

Share information and news video clips with students regarding the 2013 Python Challenge, a state-sponsored thirty-day hunt in January of 2013 in Florida, an attempt to decrease the python population. Pose questions, then search for the answers, such as: *Why did the state of Florida sponsor the event? What types of people participated? How many people participated? How many pythons were found?*

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 use the strategy of asking and answering questions to comprehend the text during discussion and on a worksheet
- accurately identify main idea and details
- correctly identify the parts of complex sentences in the text, during discussion, and on a worksheet
- fluently read number words within the text; accurately use number words in a sentence on a worksheet

Comprehension Checks

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