

Level

6

Academic Vocabulary

25 Content-Area Lessons



Author

Stephanie Paris



SHELL EDUCATION

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Research

This series, *Academic Vocabulary: 25 Content-Area Lessons*, provides ready-to-use lessons that help teachers develop effective strategies that build vocabulary and conceptual understanding in all content areas. Vocabulary knowledge is a key component of reading comprehension and is strongly related to general academic achievement (Feldman and Kinsella 2005). Students need to understand key academic vocabulary that crosses all content areas to fully develop conceptual understanding.

What Is Vocabulary Knowledge?

Simply put, *vocabulary knowledge* means having an awareness of words and word meanings. Yet, vocabulary skills are more complicated than simply reciting key terms and their definitions.

Vocabulary knowledge is often described as *receptive* or *expressive*. *Receptive vocabulary* includes words that we recognize when heard or seen. *Expressive vocabulary* includes words that we use when we speak or write. Students typically have a larger receptive vocabulary than expressive vocabulary (Lehr, Osborn, and Hiebert 2004); they are familiar with many words, but may not understand their multiple definitions or the deeper nuances of how those words are used in oral and written language.

So, then, what does it mean for a student to truly know a word? Beck, McKeown, and Kucan (2002) state that word knowledge is not black and white; understanding vocabulary is not as simple as either knowing a word or not. The process by which students learn new words is complex and often occurs in progression. Word knowledge may range from students never having heard of a word, to students understanding all there is to know about a word, or some level of understanding that lies between the two extremes. Understanding this complexity of word knowledge helps educators develop a vocabulary program that addresses these unique learning processes. The lessons in this book support both receptive and expressive vocabulary.

What Is Academic Vocabulary?

Specialized content vocabulary, although distinct, is considered a part of academic vocabulary. Yopp, Yopp, and Bishop (2009) have developed definitions for each category. **Specialized content vocabulary** words are specific to a particular content area and represent important concepts or ideas. Examples of these include *boycott* (social studies), *habitat* (science), *numerator* (mathematics), *autobiography* (reading), and *narrative* (writing). **General academic vocabulary** includes high-utility words found across content areas and throughout students' academic reading, writing, and speech experiences. Words such as *explain*, *define*, *identify*, and *organize* are examples of general academic vocabulary.

How To Use This Book

Academic Vocabulary: 25 Content-Area Lessons provides teachers with lessons that integrate academic vocabulary instruction into content-area lessons. This book includes 25 step-by-step, standards-based lessons. Each lesson features two vocabulary-development strategies that reflect the latest research in effective vocabulary instruction. The strategies within each lesson vary and are presented in detail on pages 8–31 and address the following key aspects of effective vocabulary instruction:

Developing Oral Language	Developing Word Consciousness
<p>Developing students’ oral language skills is crucial to assist them in navigating school texts and understanding more complex oral and written patterns of language. These strategies help students gain a deeper understanding of academic words and concepts by guiding them to use the words in a meaningful way.</p>	<p>These strategies provide structured opportunities to build students’ awareness of academic words used in the classroom and their lives. Students are encouraged to note when they see or hear key words and to use the words themselves. This strategy helps students develop a true love of language and a keen sense of how words sound as they hear and speak them.</p>
Teaching Words	Independent Word Learning
<p>These strategies use a variety of techniques to help students build conceptual knowledge and increase their oral and written vocabularies. This type of strategy may be incorporated at different points throughout your study. Some of the strategies are more effective in introducing new words while others will benefit students as they review and make connections among words.</p>	<p>These strategies help students derive word meanings and explore the use of context to infer the meaning of unknown words. The strategies can be taught and reviewed throughout the school year to improve students’ abilities in learning words independently.</p>

How To Use This Book (cont.)

Each two-page lesson is followed by two student activity pages as well as an assessment that allows teachers to assess students' vocabulary knowledge in effective and meaningful ways. All of the reproducible student activity pages are also included on the Teacher Resource CD.

Each lesson in this book includes two **featured academic vocabulary strategies**.

An overview of each strategy can be found on pages 8–31.

The **standards** listed in each lesson indicate the area of focus for the lesson.

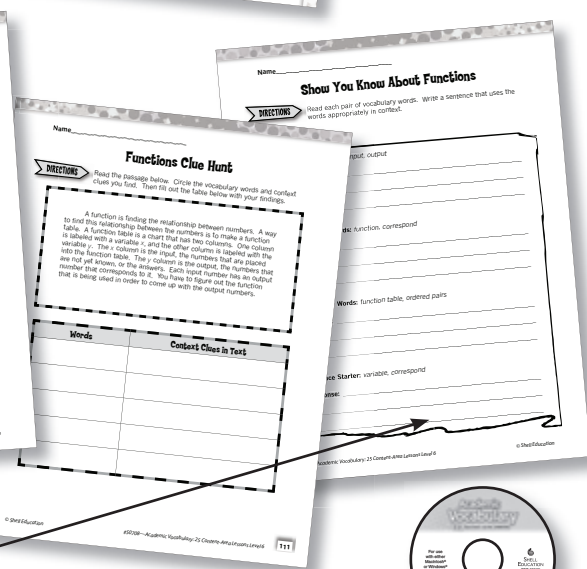
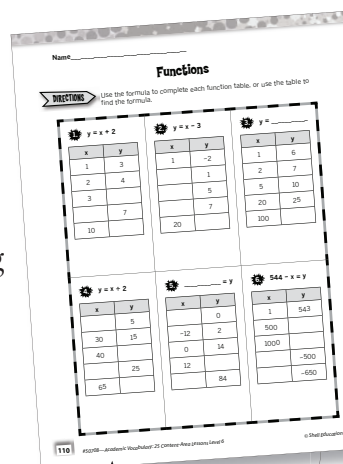
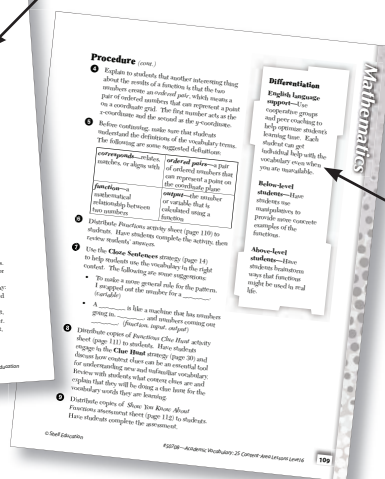
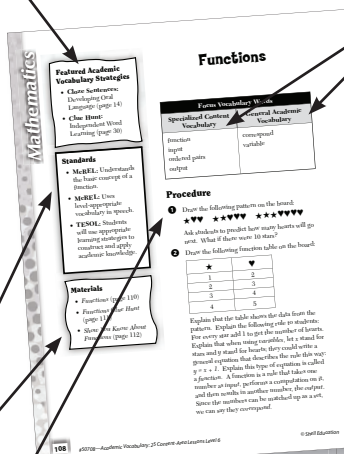
The **materials** needed to complete the lesson are listed.

The **procedures** provide step-by-step instructions for teaching the content-area lesson.

Each lesson has two student **activity pages** and an **assessment page** that reinforces the featured academic vocabulary words for the lesson as well as the standard.

Specialized content vocabulary and general academic vocabulary words are identified at the beginning of the lesson.

Each lesson includes a **differentiation** section to help meet the needs of all students.



Featured Academic Vocabulary Strategies

- **Alike and Different:** Developing Oral Language (page 16)
- **Vocabulary Diagram:** Teaching Words (page 24)

Standards

- **McREL:** Students will understand exponentiation of rational numbers and root-extraction.
- **McREL:** Students will use level-appropriate vocabulary in speech.
- **TESOL:** Students will use appropriate learning strategies to construct and apply academic knowledge.

Materials

- chart paper
- marker
- *Vocabulary Diagram: Exponents* (page 100)
- *Exponents* (page 101)
- *Yes-No-Why?: Exponents* (page 102)

Exponents

Focus Vocabulary Words

Specialized Content Vocabulary	General Academic Vocabulary
cubed number cube root exponent square number square root	power

Procedure

- 1 Introduce the vocabulary words. Then draw a square on the board. Ask students to find the area. Using the focus vocabulary words, explain that to find the area of the square one side has to be measured and then multiplied by itself, a *square number*. Write *3 squared is $3 \times 3 = 9$* . Explain 9 is a square number and is the square of 3. It can also be written as an *exponent*. It is a number that shows how many times a number is multiplied by itself. Write 3^2 on the board and explain that it is the same as saying 3×3 .
- 2 Draw a cube on the board and ask students to find its area. Explain that for a cube, the length has to be multiplied by itself three times. A *cubed number* is multiplied by itself three times. This can be denoted, or shown with a symbol, by using an exponent of 3. A cube with a side that is 5 units would have an area of $5 \times 5 \times 5 = 125$ units; 5^3 would also equal $5 \times 5 \times 5 = 125$. Tell students that 125 is a cube number and it is the cube of 5 or that 5 cubed is 125. Explain that 5 raised to the third *power* is 125.

Name _____

Yes-No-Why?: Exponents

DIRECTIONS

Read each sentence. Think about whether the context makes sense. Then respond to the sentence explaining your response and the reasons that you reached that opinion. Use the following sentence stems to get you started:

- This makes sense because...
- This does not make sense because...
- This seems logical because...
- This does not seem logical because...

1 **Sentence:** If you were to cube the number 4 to get a *cubed number*, then take the *cube root* of that number, your answer would be 4.

Response: _____

2 **Sentence:** The *square root* of 9 is 4 because the square of 4 is 9.

Response: _____

3 **Sentence:** 3^2 shows that 3 has been raised to the *power* of 2.

Response: _____

4 **Sentence:** An *exponent* is used to denote the root of a number.

Response: _____
