Teaching Vocabulary Explicitly

By
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A Teacher's Story

Mrs. Kaholo thinks about her 4th grade student Charles and the difficulty he has both with reading multisyllabic words in content specific material and with comprehending the text. She has seen some of her previous 4th graders experience the same difficulty. She wonders if Charles is another example of the *4th grade slump*, where there is a decline in student reading progress. Mrs. Kaholo recalls reading an article about how students are capable of comprehending grade-level texts in the lower grades but then become struggling readers in the middle grades. These students struggle with comprehending content specific text that is structured in a variety of ways and that uses an increasingly academic vocabulary (Chall, Jacobs, & Baldwin, 1990).

In Charles' case, when he moved from reading narrative books in the lower elementary grades to reading more expository text, he began falling behind in his understanding of vocabulary and overall comprehension. Mrs. Kaholo has noticed that in encountering a greater number of academic words, Charles is struggling with using his word-learning strategies. Specifically, Charles is not using his prior knowledge of the word, word analysis, or context clues effectively to aid in determining word meaning. Charles needs to realize that unlocking meaning at the word level will help him increase his chances of comprehending the entire text.

Mrs. Kaholo keeps anecdotal records of her students. For Charles, besides noticing that he has difficulty using word-learning strategies, she recognizes that he avoids reading because it is too hard for him. She notes that he would rather read magazines with colorful pictures and shorter texts than textbooks or trade books with limited picture support. When he does read, Charles rarely applies any problem-solving strategies, such as looking for known parts of the word, rereading, or questioning to check for understanding. On top of this, Charles has limited background knowledge and experience with the grade-level topics they will learn this year.

Mrs. Kaholo knows she has a great deal to learn about teaching vocabulary, especially for readers like Charles whose reading experience is primarily in fictional texts. First, she would like to research vocabulary instructional strategies, including the teaching of word parts. Second, she would like Charles to become a problem solver when it comes to unknown words. She hopes when he encounters difficult words, such as *mistreat*, Charles will use

word-solving techniques such as asking questions like *What parts of this word do I know?* and *What have I read so far that will help me figure out the meaning of this word?* Mrs. Kaholo would also like to expand her teacher strategy toolbox to include more activities for building background knowledge prior to the lesson.

Luckily for Mrs. Kaholo, she recognizes Charles' reading needs early in the school year. She has a strong desire to increase her understanding of vocabulary instruction and is willing to make changes in her instruction. Mrs. Kaholo has made it her professional goal to ensure that Charles does not become another statistic contributing to the *4th grade slump*.

Introduction

Because of its important role in reading development, vocabulary instruction has been a well-researched area in the field of education for many years, and it is an area in which we continue to gain new insights. The purpose of this book is to present vocabulary instruction research that is practical and effective for our target audience—teachers and staff—and to support their instructional efforts.

In *Teaching Vocabulary Explicitly*, you will learn the importance of explicitly teaching vocabulary through one teacher's journey. In "A Teacher's Story," we saw through the eyes of Mrs. Kaholo, a 4th grade teacher, as she experienced the challenges of helping 4th grade students make the transition from reading fiction in the lower grades to reading nonfiction in the upper grades. Among the challenges Mrs. Kaholo and many other teachers face is their students' unfamiliarity with academic words.

The framework for this book is based on the Pacific Communities with High-performance In Literacy Development (Pacific CHILD) program implemented by the Regional Educational Laboratory Pacific (REL Pacific) as part of a randomized control study in the Pacific region. Pacific CHILD is a principles-based professional development program consisting of research-based teaching and learning strategies proven to help improve students' reading comprehension using informational text. During the development process, the REL Pacific staff spent more than two years working alongside teachers as they implemented explicit vocabulary instruction.

We begin this book by discussing the meaning of vocabulary and why it is important to teach. Then we explain the effective components of explicit vocabulary instruction. From there, we delve further into two of the components, *how to teach individual words explicitly* and *how to teach word-learning strategies*. As concepts are explained, we include vignettes illustrating Mrs. Kaholo's processes and her application of this information. At the end of the book, we provide various vocabulary activities piloted by our Pacific CHILD teachers. We hope that the readers of this book find these activities useful for their own classrooms.

What is Vocabulary?

*V*ocabulary refers to words we use to communicate in oral and print language. *Receptive vocabulary* refers to the words we understand through reading and listening. *Productive vocabulary* refers to the words we use to communicate through writing and speaking (Lehr, Osborn, & Hiebert, 2004). In order to communicate effectively using oral and print language, we must be able to flexibly use words that we recognize and understand.

Effective reading requires two types of vocabulary, *word recognition vocabulary* and *word meaning* (Chall, 1983; as cited in Blachowicz, Fisher, & Watts-Taffe, 2005). *Word recognition* is the readers' ability to pronounce or figure out the word by using word attack strategies. *Word meaning* refers to words students know or can define. Though we recognize the importance of both word recognition and word meaning, the emphasis of this book will be on *word meaning*.

Why is Vocabulary Instruction Important?

In reading, vocabulary knowledge is essential to comprehending text (National Institute of Child Health and Human Development [NICHD], 2000). When students do not understand at least 90% of the words in a text, they do not adequately understand what they read (Hirsch, 2003; Sedita, 2005). Research suggests that students acquire 2,000 to 3,500 new words a year and know the meaning of approximately 50,000 words by the time they graduate from high school (Graves, 2006; Lehr, Osborn, and Hiebert, 2004; PREL, 2008).

As students progress from the lower elementary grades into the middle grades, the majority of their reading moves from narrative to expository text. *Narrative text* is fictional material that mainly uses one text structure (or format). Text structure is the way an author organizes the text (PREL, 2007, 2008). The narrative text structure usually includes plot, setting, problem, and resolution. This commonly used structure makes it easier for students to predict what the story will be about or what the author plans to write. *Expository text*, or nonfiction, usually has more complex content and higher-level vocabulary and is written using different types of text structures, such as description, compare and contrast, cause and effect, and problem and solution. As a result, students find it difficult to anticipate what the author plans to write next or which direction the content will flow. Below are two examples explaining how a mother panda supports its young. One example is written using a narrative structure, the other using an expository structure.

Narrative Text
After playtime, his mother sat down to snack on her favorite food, bamboo. Lin Lin loved to eat almost as much as Bao Bao loved to play—which was good, because grown-up pandas have to eat a lot of bamboo. (Liwska, 2008, unnumbered)

Expository Text
Giant pandas spend about 16 hours a day eating. They eat mainly the leaves and stems of bamboo plants… Giant pandas must eat large amounts of bamboo. A giant panda's body does not have much time to digest the bamboo. *Digest* means "to break down food" quickly so the body can use it. Pandas digest food quickly. (Duden, 1997, p. 11)

The vocabulary used in expository text builds the foundation for current and future learning. Teachers need to explicitly teach these words to help students comprehend the text. For example, the word *digest* used in the above text is repeated three times. If students understand *digest* in this context, they have a better chance of knowing this word when they learn about the digestive system in human bodies.

What are the Essential Components of Vocabulary Instruction?

Students can also learn vocabulary through indirect and direct exposure to words in a variety of language contexts. For example, students can learn vocabulary indirectly when they engage in conversations with others, through read alouds, and through independent reading (Armbruster, Lehr, & Osborn, 2001). Students can learn vocabulary directly when teachers target individual words and promote word-learning strategies (Armbruster, et al., 2001).

According to Michael Graves (2006), there are four essential components of vocabulary instruction listed below.

1. Providing rich and varied language experiences
2. Teaching individual words explicitly
3. Teaching word-learning strategies
4. Fostering word consciousness

For each component, there are specific strategies to enable students to increase their vocabulary (see Figure 1).
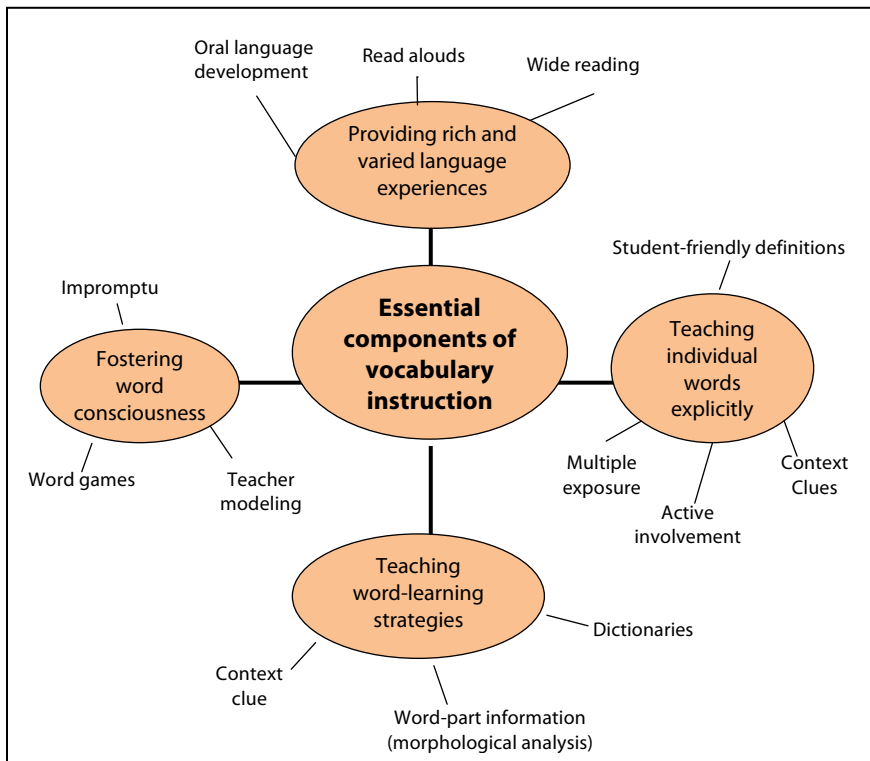

Figure 1. The four essential components of vocabulary instruction. Adapted from Graves, 2006.

Providing rich and varied language experiences

According to research, students' vocabulary increases when they are exposed to new words through various language experiences, such as reading aloud, independent reading, and oral discussions (Graves, 2006). In addition, when students are exposed to a wide variety of reading genres, from biographies to fairy tales to how-to books, they learn different types of vocabulary.

Mrs. Kaholo feels validated and plans to continue her daily *read aloud* after lunch. She thinks about having students discuss in small groups what they heard in the *read aloud* and incorporating table group discussions after students' independent reading. She hopes that discussion will expose students to other rich and varied vocabulary words. The possibility also exists of increasing student motivation to read more and to read the books that are being read by their peers.

In order to be exposed to vocabulary that is more sophisticated and academic, students need to spend time reading books and having books read to them. Several researchers have concluded that reading aloud has the potential to significantly increase children's vocabularies (Lehr, et al., 2004). Combining read alouds with discussion about the text and promoting independent reading experiences outside of school hours are both effective strategies for expanding children's vocabularies (Cunningham, 2010).

It is essential that students be provided time to engage in oral language activities such as discussing the book in class after the read aloud and discussing it at home. Children's books contain many rare words as compared to adult conversations (Hayes & Ahrens, 1988). When students are exposed to these rare words, they acquire the vocabulary to support their reading of the increasingly complex texts they encounter as they progress through school (Cunningham & Stanovich, 1991). For example, the well-loved children's book *The Very Hungry Caterpillar* (Carle, 1987) uses *cocoon*, an academic word, "to explain one stage in the life cycle of a butterfly."

The volume of reading greatly affects a student's vocabulary knowledge (Cunningham & Stanovich, 2001). Students who can read with ease tend to read more difficult material and are thus exposed to a greater number of rare words. Even striving readers will increase their vocabulary if they engage in reading (Cunningham & Stanovich, 1991); however, these students tend to avoid reading, thus missing out on the opportunity to learn rare words. Keith Stanovich (1986) termed this phenomenon the "Matthew effects" of achievement, based on a Biblical passage that speaks of the rich getting richer and the poor getting poorer.

Fostering word consciousness

The next component of promoting vocabulary development is fostering word consciousness. Word consciousness can be thought of as "an awareness of, and interest in words, and their meanings" (Graves, 2006, p. 7). This also includes word play and expressively used words such as idioms and figurative language (Lehr, et al., 2004). Teachers can increase students' vocabulary by helping them develop word conscious behaviors such as showing strong interest in words, noticing words, and learning new words. Personal interest and excitement in new words can be contagious. Encouraging students to be word conscious helps them to become lifelong learners of new words.

When Mrs. Kaholo was a little girl, she remembers how excited her grandfather was to get the morning newspaper and finish the crossword puzzle. She also remembers how he always won all of the *Scrabble®* games he played with the other adults. He would gloat about it for days afterward. She smiles thinking about the memories and realizes that her grandfather playing different word games probably contributed to his large vocabulary. Her mood changes quickly and now she feels overwhelmed. She sighs and thinks, *Now I have to think of word games for the students to play*.

Ways to foster word consciousness include playing word games, telling tongue twisters or jokes, and highlighting interesting words found in the texts (Lehr, et al., 2004).

Teaching individual words explicitly

In addition to learning vocabulary indirectly through various reading and writing activities, students benefit from direct and explicit teaching of individual words (Graves, 2006). Although students will learn many words from the various classroom language experiences, explicit instruction of carefully selected words is needed for students to understand content-specific texts. Through the direct teaching of key words, students acquire the in-depth knowledge they need in order to understand the meaning of words they will encounter while reading. The National Reading Panel found that direct instruction is highly effective for vocabulary learning (NICHD, 2000).

The four strategies for teaching individual words explicitly are:
1. providing student-friendly definitions,
2. using words in context,
3. providing multiple exposures, and
4. offering opportunities for active involvement.

(Details on these strategies can be found beginning on page 13.)

Teaching word-learning strategies

Word learning strategies are the tools students can use to figure out the meaning of unfamiliar words and increase their word knowledge. Direct teaching of word-learning strategies can help students become better independent words-learners (Baumann, Edwards, Boland,

Olejnik, & Kameʻenui, 2003; Blachowicz & Fisher, 2000; Graves, 2006; NICHD, 2000).

The following are effective word-learning strategies:
- Identifying and using context clues
- Knowing how to use word-part information
- Using a dictionary accurately (Baumann, et al., 2003; Graves, 2006; Lehr, et al., 2004; NICHD, 2000).

Although all of the essential components of vocabulary instruction are important, our emphasis in the remaining sections of this book is on teaching individual words explicitly and teaching word-learning strategies. We will infuse rich oral language experiences and word consciousness within these two components (see Figure 2).
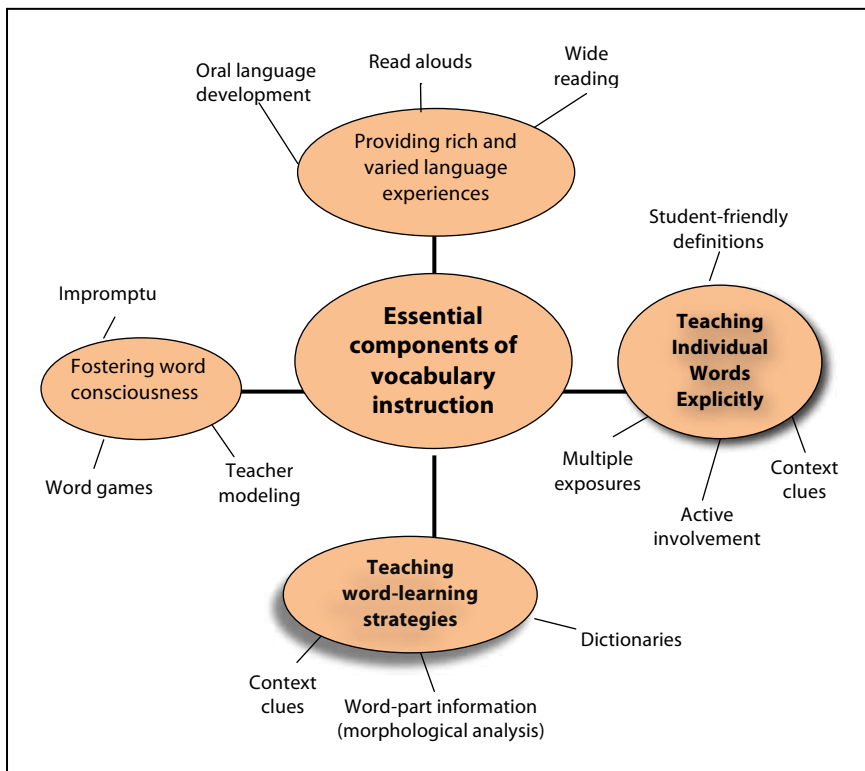
As a practice, Mrs. Kaholo skims through the migration chapter in the science book. While skimming, she writes down the words she feels need explicit instruction. After the second page, Mrs. Kaholo has fifteen words on her list. She becomes overwhelmed and thinks to herself, *When will the students read if all we're doing is learning vocabulary?*

Figure 2. Essential components of vocabulary instruction. Adapted from Graves, 2006.

Why is it Important to Teach Individual Words Explicitly?

Earlier we discussed the need for direct teaching of specific words in order for students to fully understand the text (NICHD, 2000). Students who are active readers learn many words incidentally through wide reading, but students who read less do not. According to Beck, McKeown, and Kucan (2002), "The problem is that many students in need of vocabulary development do not engage in wide reading, especially of the kinds of books that contain unfamiliar vocabulary, and these students are less able to derive meaningful information from the context" (p. 4).

In addition to the words students learn incidentally through wide reading and other language-rich activities, students learn new words when they are taught these words explicitly. Stahl (1999) suggests that teachers can provide direction instruction of 300 to 500 words in one school year, or about 8 to 10 words per week. Selected words can be taught in depth and will provide students with the knowledge they need in order to comprehend what they read. Students who are not spending time reading independently need this direct teaching to help increase their vocabulary. Without the direct, in-depth teaching of key words, most students will face difficulties understanding what they read.

What are the Steps for Teaching Individual Words Explicitly?

Teaching individual words explicitly should be done meaningfully and through a systematic approach so that students will establish routines for learning. These are the three steps and four strategies for teaching individual words explicitly (Beck, McKeown, & Kucan, 2002; Graves, 2006; NICHD, 2000; PREL, 2008):

1. Identify the potential list of words to be taught.
2. Determine which of these words to teach.
3. Plan how to teach the words using the following strategies:
   a. Provide a student-friendly definition.
   b. Use the word in context and give contextual information.
   c. Provide multiple exposures.
   d. Offer opportunities for active involvement.

Step 1: Identify the potential list of words to be taught.

Approximately three to five words should be taught in one lesson. The importance of keeping the number of words to a minimum is to ensure there is ample time for in-depth vocabulary instruction yet enough time for students to read the text. Though teachers may be tempted to teach all of the unknown words, Armbruster and colleagues (2001) provide several reasons for focusing on only a few words at a time:

- The text may have too many words that require direct instruction.
- More time should be devoted to students' reading than to extensive direct vocabulary instruction.
- Students are generally able to understand most of the text without knowing all of the words.
- Students need independent practice using word-learning strategies.

> Mrs. Kaholo takes out the issue of *Time for Kids Magazine* that contains the article "Goal: Ending Child Labor," which she plans to use in her lesson on social issues. She scans the article and starts listing words she would like to teach explicitly. Her list consists of: *crouched, Asia, Pakistan, mistreated, exists, campaign, cruel, child labor, officials, hazardous, haul,* and *harvest*. Again, she is overwhelmed. The professional book she read said to select three to five words yet her list exceeds that amount. There must be a better way to determine which words will give her the most bang for her buck.

Step 2: Determine which of these words to teach.

As mentioned earlier, expository text may be dense with technical academic words. It is important for teachers to preview the text prior

to teaching. The following are criteria to help teachers make decisions about which words to teach explicitly (PREL, 2008):

- The word is too difficult to understand without any background knowledge.
- The word is critical to comprehending the text.
- The word is a content and/or process word that explains a concept or topic.
- The context clues do not help with understand the meaning of the word.
- The word is likely to be found in future reading.

Appendix A provides a tool to help teachers determine which words to teach explicitly.

Step 3. Plan how to teach the words using specific strategies.

Once the words to teach explicitly have been identified, teachers must carefully plan to teach them using these four key strategies (Graves, 2006):

- Provide a student-friendly definition.
- Use the word in context and give contextual information.
- Provide multiple exposures.
- Provide opportunities for active involvement.

Appendix B provides a tool to help teachers use these strategies to teach words explicitly.

Strategy 1: Provide a student-friendly definition.

Use everyday language to help students understand the meaning of a word. Teachers need to be specific, they need to elaborate, and they need to connect the definition to students' existing knowledge. Descriptive explanations enable students to more easily understand the concepts (Beck, et al., 2002; Graves, 2006; PREL, 2008).

Strategy 2: Use the word in context and give contextual information.

When teaching vocabulary, it is important to show students how the words are being used in context. When students are asked to look

> Mrs. Kaholo thinks, *Why didn't the author share these selection criteria first?* But then she had a second thought: *Well, if I didn't have a list of words, I wouldn't read the article from the student's perspective, so maybe it's a good idea to make a list and then narrow it down.* She looks at her list of words again. She decides *child labor, crouch, hazardous, exists,* and *officials* will be her target words. She then revisits her original list and thinks, *But all those words are important! Charles and a bunch of others probably do not know where Asia and Pakistan are. We don't live in a farming community, so how will they know the meaning of* haul *and* harvest? *And* mistreatment *is a good word for teaching word parts. How can I get my students to know these extra words without spending so much time teaching each one explicitly?*

> Mrs. Kaholo looks at the article again and picks the word *crouch*. She creates a student-friendly definition: *Crouch* means "to lower the body close to the ground by bending the legs."

up the meaning of a word in the dictionary, they frequently select an incorrect definition. When students see how the word is used in context, they can connect to the appropriate meaning (Armbruster, et al., 2001; Graves, 2006; PREL, 2008; Stahl, 1999). Teachers can accomplish this by having students locate the word in the text, read the sentence, and then discuss as a class how to determine its meaning.

Mrs. Kaholo looks at how the word *crouch* is used in the text:
"He sits crouched in the corner of a hot, airless shop for 12 hours." (Tuff, 1996, September 20)

Strategy 3: Provide multiple exposures.

It is important to give students frequent opportunities to hear the meaning of words and to expose students to multiple contexts in which the word can be used so that they can develop a deeper understanding of the word and how it is used flexibly (NICHD, 2000). Examples can include pictures, sentences using the words in different contexts, and more.

Mrs. Kaholo comes up with the following examples for multiple exposures.
a. After *crouching* for many hours, you may find that your back becomes stiff.
b. Animals *crouch* behind bushes when they hunt for prey.
c. When you play hide and seek, you often *crouch* behind the furniture so no one can see you.

Strategy 4: Offer opportunities for active involvement.

Students are more likely to solidify their understanding of words when the teacher allows them to process the information through one or two quick activities or games (Beck, et al., 2002). Appendix C provides several options for classroom use.

Mrs. Kaholo thinks of two simple activities that encourage movement:
1. What does it look like when you *crouch*?
2. Turn to your partner and complete this statement, "I *crouch* when …," then show what it might look like.

After the teacher has provided background information about the topic and explicitly taught the vocabulary by providing student-friendly definitions, using the words in context, providing multiple exposures, and offering opportunities for active involvement, it is time for students to read the text. Each day, teachers must create opportunities for students to read continuous text without interruptions.

Mrs. Kaholo is feeling more confident about planning for vocabulary instruction. She quickly designs a template to help her remember the steps and tests it using the word *labor*. She also wants to search for more active involvement techniques.

Word: labor	
Student-friendly definition – The teacher uses everyday language to help students understand the meaning of the word. It is specific, it elaborates, and it connects to what the students know.	**Labor** means *"physical hard work or effort."* *People who engage in physical hard work or effort are called* **laborers**.
Context – The teacher reads the sentence/s in which the word appears in the text and directs students to locate the occurrences.	*Child* **labor** *exists in two-thirds of the world's nations. (paragraph 1)*
Multiple exposures – The teacher provides examples for students to see the word used in different contexts through examples, contexts, pictures, and relationships.	1. *Construction workers* **labor** *each day.* 2. *We hired* **laborers** *to build our stone wall.* 3. *We* **labored** *all day packing boxes and doing other things to get ready to move to our new house.*
Active involvement – The teacher helps students process the meaning by engaging them in a quick activity/ game.	Show thumbs up (agree)/down (disagree): *The job of [teacher, fireman, librarian, principal, construction worker, student] is difficult* **labor**.

Word-Learning Strategies: Word Parts, Context Clues, and Dictionary Use

The second essential component we will discuss is teaching word learning strategies. *Word-learning strategies* involve the use of word parts, context clues, and dictionaries to determine the meaning of unknown words (see Figure 3). First we explain what is meant by "word parts" and how to teach them. Then we discuss how to teach about context clues and dictionary skills.

Figure 3. Essential components of vocabulary instruction. Adapted from Graves, 2006.
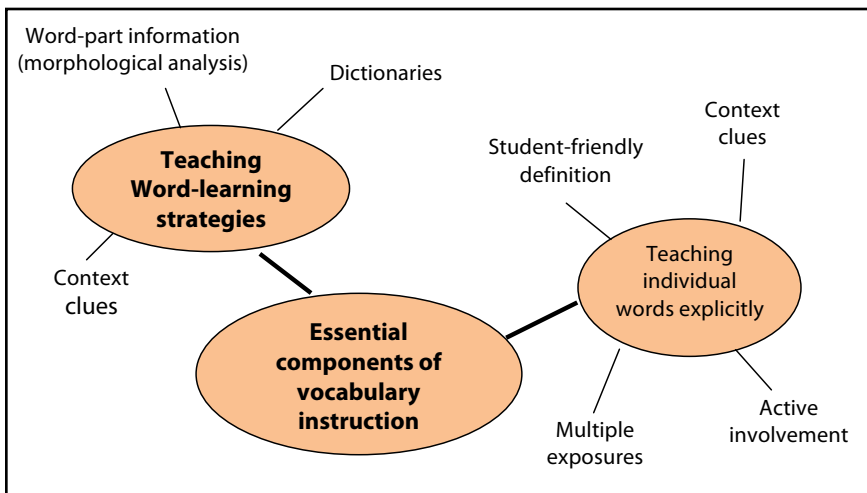
What is meant by word parts and why are they important?

Morphology can be defined as "the structure of words in a language or the study of word formation" (PREL, 2008, p. 41). A morpheme is the smallest part of the word that carries meaning. When readers assemble the parts of word, they are better able to construct meaning of an entire word (Baumann, et al., 2010). For example, in the word *unhappy* there are two morphemes: *un* and *happy*. *Un* means "not" and *happy* means "feeling joy or gladness." Therefore, by assembling the meanings from the morphemes, the word *unhappy* means "not joyous or not glad."

Morphemes are better known as word parts—*root words* or *base words* and *affixes* (also known as *prefixes* and *suffixes*). Results from one study with 4th and 5th graders indicated that students who understood morphology were more successful at learning academic vocabulary and comprehending text (Kieffer & Lesaux, 2007). In addition, researchers have posited that knowledge of morphology can help substantially increase the breadth and depth of one's vocabulary (Edwards, et al., 2004).

Students are often unaware that dissecting words into parts helps them understand words (Stahl, 1999). Therefore explicit teaching of word parts is important. One method of promoting knowledge of word parts is to implement instruction that, in addition to using a word list, targets new words derived from common roots (Rasinski, Padak, Newton, & Newton, 2008). Word study sessions usually last 10 to 20 minutes and occur two or three times a week. During a word study session, the teacher provides in-depth instruction on prefixes, suffixes, and roots. Once students have a clear understanding of the word parts, these word study sessions may be discontinued or limited to the students that need additional focused instruction.

What are base words, root words, and affixes?

You may associate the terms *base word*, *root word*, and *affix* with vocabulary, but are unclear of the role each one plays. Explicit teaching of these word parts gives students an important strategy for learning new words (PREL, 2008).

Base word – A base word is the smallest group of letters that forms a complete word (PREL, 2008). For example, *care* is a base word that can be used by itself, as a verb or a noun (for example, *Joseph* cares *for his plants by watering them daily; Mrs. Smith is now under the* care *of a doctor.*) Because *care* is a base word, we can also add different beginnings and endings to change its use or meaning, such as *careful, caring, uncaring*.

Root word – A root word is a special kind of base word. Like a base word, it carries the main part of a word's meaning, but it often needs a prefix or suffix to form a complete word in English. Many roots come from Greek or Latin. For example, *struct* is a root word meaning "build or form." However, *struct* is not a word on its own. To make this a word—for example, *construction, destruction, obstruction*— other word parts must be added. There are a few root words, such as *meter, script,* and *port,* that can stand alone. But for most root words, more letters must be added to be form a usable word (PREL, 2008).

Affix – An affix is a word part that can be placed at the beginning or end of a root or base word. The word part at the beginning of a root or

base word is called a *prefix*. The word part at the end of a root or base word is called a *suffix*.

Stahl and Kapinus (2001) estimate that more than half of all words contain a familiar prefix or suffix or are compound words. The base or root word carries the main meaning in many sophisticated and academic words. For example, the root word *graph* means "writing or printing." When students understand this root word, they are more likely to know the meaning of words such as *biography, telegraph,* and *photograph.*

A compound word comprises two different words. For example, *backpack*, *raindrop*, and *sunlight* are compound words. A compound word is different from words formed with prefixes and suffixes because if you break up the compound word, its separate word parts can stand alone (*back* and *pack*, *rain* and *drop*, *sun* and *light*).

It is important for students to know how to use their understanding of prefixes, suffixes, and root/base words to unlock the meaning of words. And they can use a *process approach* to accomplish this. A process approach is a much more effective method for learning word parts than merely identifying and labeling specific word parts as prefix, suffix or root/base. The process approach for integrating the teaching of words parts into a vocabulary program consists of three key components:
- Provide students with knowledge of prefixes, suffixes, and root/ base words in focused lessons.
- Teach meaningful word parts explicitly as the need arises in the reading material.
- Teach students different strategies for analyzing the word parts.

1. **Provide students with knowledge of prefixes, suffixes, and root/ base words in focused lessons.**
   Before students can apply prefixes, suffixes, and root/base words to unlock the meaning of words, they must first know what these word parts mean. Teachers can begin by explaining the meaning of prefixes, suffixes, and root/base words and how each supports the meaning of words. The following are examples written in student-friendly language:
   - Base word – A base word is the smallest group of letters that forms a complete word. (PREL, 2008). For example, the word *pay* is a base word. We can add letters to the beginning or end to form new words (for example, *repay* and *payment*).
   - Root word – A root is actually a special kind of base word. A root carries the main part of the meaning. Like the root of a tree,

a word root is necessary for growth or word building. Because so many roots come from Greek or Latin, most roots need to be combined with other groups of letters when they are used in English (PREL, 2008). For example, the root word *astro* means "star." Other letters are needed to form complete words, such as *astrology, astronaut*, and *asteroid*.

- Prefix – A prefix is a group of letters that is added to the beginning of a root or base word and that changes its meaning (PREL, 2008). For example, the prefix *un* means "not" or "opposite of." In the word *unlike*, the base word is *like*. One of the meanings of *like* is "similar to." By adding the prefix *un*, the meaning changes to "not similar" or "different."
- Suffix – A suffix is a group of letters that is added to the end of a root or base word and that changes its meaning, although its new meaning is often close to the original meaning (PREL, 2008). A suffix can:
  - Change the part of speech (for example, *run, runner*).
  - Change a noun from singular to plural (for example, *cat, cats*).
  - Change verb tense (for example, *wait, waited*).
  - Establish a relationship (for example, *employer, employee*).
  - Show a difference in quantity (for example, *less, lesser*) and number (*few, fewest*).

2. **Teach meaningful word parts explicitly as the need arises in the reading material.**
   Similar to teaching individual words explicitly, teachers are advised both to teach word parts within the context of explicit vocabulary lessons when meaningful word parts appear and to teach separate mini lessons (Manzo & Manzo, 1990; as cited in Blachowicz, et al., 2005). Experts suggest that within a school year, middle elementary students receive intentional and deliberate instruction of 9 frequently occurring prefixes and 10 frequently used suffixes (White, Sowell, & Yanagihara, 1989; see Appendix E).

Teaching Prefixes

According to Graves (2004), teaching prefixes is a good investment of teaching time for several reasons. First, a large percentage of words use a relatively small group of prefixes. For example, knowing the prefix *un* can help students understand words such as *unlike, uncomfortable, unhappy, unload*, and *unlock*, to name just a few. Second, prefixes tend to be consistently spelled correctly at the beginning of the word, unlike suffixes that come at the end of the word. (For example, to emphasize the state or quality of something, both the suffix *ity* and the suffix *ty* are used, as in *necessity, loyalty,*
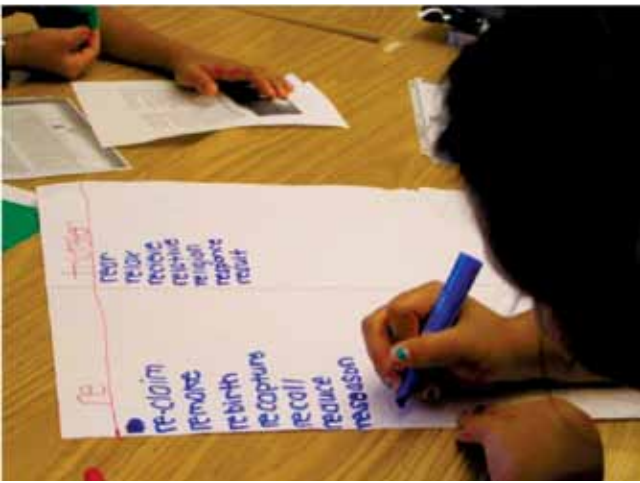
unity). Finally, prefixes are relatively easy for students to identify (Baumann & Kame'enui, 2004). White and colleagues (1989) identified the 20 most commonly used prefixes in student texts for grades 3 through 9. They found that the prefix *un* appeared in 26% of words that have a prefix, followed by *re*, which appears in 14% of words that have a prefix (see Appendix E).

Despite the great utility of prefix knowledge, one challenge for students is being able to identify *tricksters*. Tricksters are words that appear to have a prefix but do not. So students need to know how to remove the prefix and look at the remaining word part to determine if it has meaning. For example, when *un* is removed from the beginning of the word *uncle*, the remaining letters are *cle*, which is not a meaningful word or word part.

The first step in teaching prefixes is to determine which ones students will encounter in the curriculum during the year. The next step is to prioritize which ones to teach first (see Appendix E). Once the prefixes have been prioritized, the following are suggested steps on how to teach them (Blachowicz, Fisher, & Watts-Taffe, 2005).

1. Present the prefix in isolation and provide four words that contain the prefix.
2. Define the prefix.
3. Use the whole words in sentences.
4. Define the words.
5. Give students an opportunity to find other words that contain the prefix.
6. Have students start a notebook that going forward they will use to keep track of new combinations of vocabulary words and prefixes.

Mrs. Kaholo tries out the prefix steps to familiarize herself with the process.

Step 1: Present the prefix in isolation and provide four words. She uses the prefix re with the examples of *reread, rethink, reuse,* and return.

Step 2: Define the prefix. *Re* means "again" or "back".

Step 3: Use the words in sentences.
- The boys were asked to <u>re</u>read the book.
- Alice took a moment to <u>re</u>think how she solved the puzzle.
- My mom <u>re</u>uses the plastic bags from the grocery store to store my wet swimming suit.
- I have to <u>re</u>turn the books to the library.

Step 4: Define the words.
- *Reread* means "to read again."
- *Rethink* means "to think again."
- *Reuse* means "to use again," sometimes in a different way.
- *Return* means "to give something back" or "to come back again."

Mrs. Kaholo realizes that teaching prefixes isn't as time-consuming as she thought it would be. Now she needs to think of opportunities to give students a chance to find other words with the prefix (step 5) and have them start a vocabulary notebook (step 6).

Teaching Suffixes

Suffixes are more difficult to teach than prefixes. The use of suffixes is dependent on the root/base word or the grammatical structure of the sentence. In addition, there are many exceptions that can be difficult to remember. Sometimes suffixes carry a meaning, such as the suffix *ment*, which means "the condition or quality of" or "the state of." But sometimes suffixes don't carry a meaning. For example, to change from singular to plural, *s* is usually added (*girl→girls*) unless the word ends in *s*, then *es* is added (*bus→buses*). And then there are the suffixes that alter verb tense (*add→added*) and change degree (*high→highest*). Memorizing these meanings, functions, rules, and exceptions can be confusing for students. It is more beneficial to have them practice removing suffixes (Stahl, 1999; White, et al., 1989). (See Appendix F.)

As with prefixes, the first step is to prioritize the suffixes that students will frequently encounter. You can teach suffixes explicitly by following these steps:
- Explain what a suffix is.
- Show how the suffix is used in the text.
- Explain the meaning or purpose of the suffix (for example, grammar concept, has a meaning).
- Provide students with several examples of words using the suffix to help them become familiar with the meaning.

- As a class, brainstorm other words that end with the same suffix and list them on the board.
- Allow students to practice removing the suffix to determine the meaning of the root/base word.

Similar to prefixes, Mrs. Kaholo tries the suffix steps to familiarize herself with the process.

Step 1. Explain what a suffix is. Mrs. Kaholo says, *Suffixes are letters or groups of letters added to the end of base words. Today, we are going to learn about the suffix* ment.

Step 2. Show how the suffix is used in the text: *The young student showed excite<u>ment</u> when he viewed the full moon through the telescope.*

Step 3. Explain the meaning of the suffix. The suffix *ment* means "condition of, quality of, or state of."

Step 4. Provide other examples on how the suffix is used.
- *It is difficult to find employ<u>ment</u> during these tough economic times.*
- *The email included a large attach<u>ment</u> that was 100 pages long.*

Not bad, Mrs. Kaholo thinks to herself. She encourages the class to come up with other words that have the suffix *ment (step 5)* and to give them practice removing *ment* from words (step 6).

Teaching Root Words

Most academic words have Latin and Greek roots (see Appendix G). Helping students understand the meaning of these root words increases the number of words that can be added to their vocabulary bank, or lexicon. Root words can be found at the beginning, in the middle, and at the end of words. The following steps provide guidance in teaching root words explicitly (Graves, 2006; PREL, 2007, 2008).

1. Explain that a root word is the part of the word that carries the meaning.
2. Give an example of a word and identify the root.
3. Draw a semantic web on the board and write the root word in the middle.
4. Give examples of other words with the same root and write them on the spokes of the web.
5. Ask students to provide other examples of the root and add them to the web.
6. Ask students to figure out the meaning of the root word by looking at the other examples.
7. Discuss how knowing the meaning of the root word helps them figure out the meaning of other words that have the same root word.

Mrs. Kaholo tries out the steps to teach a root word.

Step 1. Explain what a root word is. Mrs. Kaholo says, *A root word is the part of the word that carries the meaning.*

Step 2. Give an example of a word and identify the root. Mrs. Kaholo provides the example *inspect*. She tells her students that the root is *spect* and that it means "to see."

Step 3. Draw a semantic web and write the root word and the definition in the middle.

Step 4. Give examples of other words with the same root.
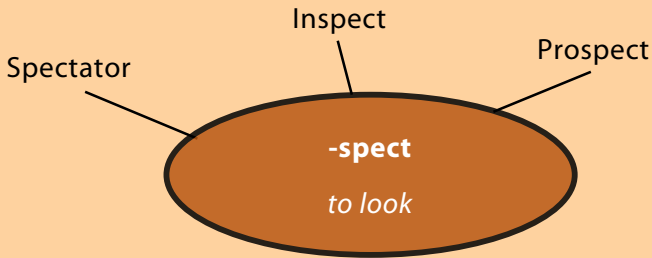
Mrs. Kaholo likes the semantic web and thinks students will too because they are able to create many words based on the root word. She also thinks that the semantic web can be applied to learning prefixes and suffixes.

3. Teach the students a strategy for analyzing the word parts. Researchers suggest that students learn the meaning of word parts rather than memorize a set of rules (Kieffer & Lesaux, 2007; Graves, 2006). One effective strategy is *Word Detective*. Word Detective guides students through a series of steps to help uncover the meaning of a word and its word parts (PREL, 2007, 2008). Eventually, students will internalize the steps and be able to use the strategy independently.

The Word Detective strategy should be modeled explicitly several times, using the gradual release of responsibility model (Baumann, et al., 2010). In this model, students receive maximum help as they are learning and then the teacher releases some of the learning responsibility onto students little by little until they become independent. An anchor chart can be posted on the classroom wall to serve as a reference tool for students (see Figure 4).

Word Detective: Using Context Clues and Word Part Clues

When you come across a word and you don't know what it means, follow these steps to help you determine the meaning.

1. **Use context clues.**
   Read the text and sentences around the word to see if there are clues to its meaning.

2. **Break the word apart.**
   - Look for the root word and figure out the meaning.
     - A root word is a word in its simplest form that carries the main meaning. It has no added word parts.
   - Look for the prefix and figure out the meaning.
     - A prefix is a group of letters added to the beginning of a word that changes its meaning (*un* [not] + *happy* = *unhappy*, which means "not happy").
   - Look for the suffix and figure out the meaning.
     - A suffix is a group of letters added to the end of a word that changes how a word is used (*inspect*, *inspector*) or changes what a word means (*clueless* means "without a clue").

3. **Put the word back together.**
   Put the meaning of the root word and any prefix and/or suffix together to see if you are able to build the meaning of the word.

4. **Reread the text.**
   Read again to see if you figured out the word's meaning. Ask yourself, *Does the meaning that I figured out make sense in this sentence?*

Figure 4. Anchor Chart of the Word Detective strategy. Adapted from Baumann, Font, Edwards, and Boland (2010).

Word Detective

After experimenting with the different ways to teach word parts explicitly, Mrs. Kaholo decides to teach the Word Detective strategy to her students.

Mrs. Kaholo: *Good morning, students! Sometimes while reading, you come to a word that you don't understand and this interferes with understanding what you are reading. This word may be important, so you should stop and figure out the meaning. The Word Detective strategy can help you uncover the meaning of words using three different steps. The first step is to use* context clues*, which means "*looking for clues*" in the content around the word. The second step is to look at different parts of the word. We can do this by breaking the word apart. We can look for a group of letters added to the beginning, which is called a prefix. We can look for a letter or group of letters added to the end, which is called a suffix. And we can look for the base word, or the part of the word with the meaning. After we break apart the word, the third step is to put the word back together. Right now, we're going to read an article and learn how to use the Word Detective strategy.*

The students are given the article "Goal: Ending Child Labor" from *Time for Kids* magazine.

Mrs. Kaholo: *Let's take a look at the word* mistreatment *in paragraph 7. First I'm going to read the text aloud, then I'm going to think aloud so you can see what my brain is thinking.*

Mrs. Kaholo reads the paragraph aloud and then does a think-aloud.

> People can put pressure on leaders to make changes and to stop the misuse of children. The mistreatment of child workers is not just a foreign problem. Since colonial times, the U.S. has counted on children to lend a helping hand in its fields and factories. (Tuff, 1996, September 20)

Hmmm. I'm not sure what mistreatment *means. I'm going to use the Word Detective steps to help me. Step 1 says to use context clues and read the text and sentences around the word to see if there are clues to the meaning. I'll reread the first sentence.*

> People can put pressure on leaders to make changes and to stop the misuse of children.

The first sentence talks about misuse *of children. I know the word* use *means* "to wear or to put something in action." *But I'm not sure what* misuse *means. And I don't understand how* misuse *and* mistreatment *are connected. I'll read the second sentence to see if I can learn more.*

> The mistreatment of child workers is not just a foreign problem.

I see by the second sentence that mistreatment *is a problem. I'm going to read the next sentence to see if that will help me.*

> Since colonial times, the U.S. has counted on children to lend a helping hand in its fields and factories.

And the next sentence tells me that it's about children working. I still need more information. I better go on to step 2.

Step 2 tells me to break the word apart. Let's look at mistreatment. *How can I break the word apart? Oh, I see the word* treat *in the* middle. *Then I see another chunk,* mis, *in the beginning and another chunk,* ment, *at the end. Let me write those on the board.*

<div align="center">

mis   treat   ment

</div>

As she writes *treat* on the board, she talks aloud in figuring out the meaning.

> *I think* treat *means "*how you interact with someone," *like when someone is nice to you, you* treat *them nicely.* Treat *can also mean "*receiving something special." *For example, my dad would* treat *me to an ice cream cone when I helped him clean the garage. I know a complete word* miss, *but it has two s's at the end. Maybe this* mis *is a prefix, since the words* mistreatment *and* misuse *are used in the text. I'll take a look at our class prefix chart to see what* mis *means. I see* mis *means* "bad" *or* "wrong."

> *So now I get that* mis+treat *means that "*someone is being treated badly." *Now what about the chunk at the end? I wonder—since a prefix is used, maybe* ment *is a suffix. I'll look at the suffix chart. The chart says* ment *is added to lots of words, like* enjoyment *and* excitement *and* predicament. *I see from our classroom suffix chart that* ment *can show an action or a process.*

Step 3 says to put the word back together to see if I can figure out the meaning.

> **mis** = bad or wrong
> **treat** = how you handle someone or something
> **ment** = an action or a process

> *I think* mistreatment *means "*when someone is being treated badly."

Step 4 tells me to reread to see if the meaning I figured out makes sense.

> *The children are treated badly—that makes sense. I think I am right. What do you think?*

> *Mrs. Kaholo turns to the class and asks them to share with a partner their understanding of the word* mistreatment. *She knows the importance of providing opportunities for students to engage in rich and varied language situations. She brings the*

students back to a whole group and asks for volunteers to share their conversation.

Charles volunteers. *Not only children can be* mistreatment. *Animals can be* mistreatment *too. I saw on the news that a man didn't take care of his dogs. The dogs had cuts on their body, and they were really skinny. It's like he didn't feed them for a long time.*

Listening to Charles, Mrs. Kaholo realizes he understands the meaning of *mistreatment*. But instead of *mistreatment*, he should have said *mistreated*. She makes a mental note to work on suffixes and explain how the word structure can change depending on how it is used in the sentence.

Mrs. Kaholo responds to Charles: *You're correct, Charles. Dogs can be* mistreated *by their owners. What you should also know is that different kinds of animals, not only dogs, are* mistreated. *I'm glad you brought that up because you made me realize something else. The word* mistreatment *can be used differently. In the article, the word* mistreatment *is* used. *We can also say* mistreat, mistreats, mistreated, mistreating. *Imagine that! If you know the word* mistreatment, *you will learn five more words.* Mrs. Kaholo writes these words on the board, reinforcing the use of suffixes by underlining the letters at the end.

mistreat
mistreat<u>ment</u>
mistreat<u>s</u>
mistreat<u>ed</u>
mistreat<u>ing</u>

Mrs. Kaholo continues. *Let's try one more word.* Mrs. Kaholo writes the following sentence on the board.

> Craig believes kids can make a difference. He has this advice for them: Write letters to companies and government officials. Put pressure on leaders to make changes and to stop the misuse of children. (Tuff, 1996, September 20)

> She then asks the students to use the Word Detective strategy to figure out the meaning of *misuse*. This is her guided practice, so she knows students still need to hear explicit directions.

Let's try step 1: Use context clues and read the text and sentences around the word misuse *to see if there are clues to the meaning.*

Mrs. Kaholo continues on to step 2. She watches students break apart the word.

mis   use

> Charles and his partner John excitedly call out while their hands are flailing in the air. *We know the word! We know the word!*

Charles calls out: Misuse *is* "to use it bad."

John adds on: *Yeah,* misuse *is* "to use it wrong." *Like when me and Charles was using the basketball as a soccer ball during recess. Mrs. Tanaka took it away because we were* misusing *it.*

Mrs. Kaholo feels proud. Students were able to transfer their knowledge of the word *mistreatment* and figure out the meaning of *misuse* quickly.

Charles and John, what great detectives you are. Yes, misuse *means* "to use something wrongly." *The example of the basketball was a good one. Real quick everyone, turn to your partners and share an example of something you have* misused *or have seen someone else* misuse.

The students chatter. Mrs. Kaholo sees the power of having students turn and talk and share orally. They can share their learning and learn from others.

For independent practice, Mrs. Kaholo has students read the text, apply the Word Detective strategy to two or three words taken from their reading, and record their answers in their vocabulary notebook.

Try to solve those words yourself at first. If you find it too challenging, you may work with a partner. Look at the Word Detective chart on the bulletin board to guide you through the process.

At the end of the lesson, the whole group gathers to share their work and explain how the Word Detective strategy was helpful with solving unknown words. Mrs. Kaholo addresses any challenges they encountered and provides correction. They have a few minutes before getting ready for lunch. She plays a quick game to help reinforce the word *mistreatment* and to foster word consciousness. She points to the list of words derived from the word *mistreatment*. She shares a cloze or "fill in the blank" sentence and asks students to guess which word would best fit the sentence.

mistreat
mistreat<u>ment</u>
mistreat<u>s</u>
mistreat<u>ed</u>
mistreat<u>ing</u>

Teaching Context Clues

Context clues are the words, phrases, sentences, paragraphs, pictures, and other text features that give clues to the meaning of an unknown word. Using context to determine an unknown word is highly recommended as an effective word learning strategy (Blachowicz 2005; Graves, 2006). Teaching context clues involves good planning, explicit instruction, and opportunities for students to practice and receive feedback using the gradual release of responsibility (Blachowicz 2005; Pearson & Gallagher, 1983).

According to Baumann (2010), context clues are important to teach because:

- The meaning of the word is sometimes stated in the sentence or sentences before or after the unknown word.
- There may be clues in the sentence or sentences before or after the unknown word.
- Some texts provide the meaning of the word, but students may overlook it.
- The most helpful hints are often found in the same sentence, but students do not recognize these hints.
- Some clues may be misleading. Students need to take the initiative and ask, "Does this meaning make sense in this context?"

There are many different kinds of context clues. To help students become familiar with using context clues, teachers can create an anchor chart outlining the clues students can use to unlock the meaning of words (see picture in the Teaching Context Clues vignette). The Word Detective strategy can be used to teach context clues.

Teaching Context Clues

Mrs. Kaholo is happy to learn the steps to teach context clues. She follows the guidelines and plans a lesson to help her students learn to use context clues as a word-learning strategy.

Mrs. Kaholo: *Earlier we learned how to use the Word Detective strategy to use word parts to understand the meaning of unknown words. Today we are going to focus on another strategy involving context clues. Let's create an anchor chart— we'll call it* Using Context Clues. *We can write down the strategies we use to figure out how authors help us understand the meaning. The first step is to read the text and stop when you come to an unknown word. Look at this sentence from a text about sharks:*

> "The great white sharks are the largest predatory (involved in hunting other animals) fish." (*Smalls,* December 6, 2002)

Now, the unknown word to me is predatory. *I would like you to talk with your partner and see if you can figure out the meaning of* predatory. *Discuss the clues that helped you determine, or figure out, the meaning.*

Can anyone tell us what the word predatory *means and what clues helped with determining, or figuring out, the meaning?*

John: Predatory *means that* "the shark is a predator and hunts other animals."

Mrs. Kaholo: *Yes, that's true. Can you tell me what clues helped you figure out the meaning?*

John: *It says right there in the text,* "involved in hunting other animals."

Mrs. Kaholo: *Yes, the answer is right in the sentence. Sometimes the definition or other clues are right in the same sentence as the unknown word. Other times, the clues are not so easy and the reader has to work hard to find them. And sometimes there aren't any clues provided. So one way you can figure out unknown words is to look for clues in the same sentence. I'm going to write* "in the same sentence" *in the clue section on our anchor chart.*

Charles: *Mrs. Kaholo, is the word* predatory *supposed to be a trickster? I mean, why is there a* y *at the end of the word* predator?

Mrs. Kaholo: *Good eyes, Charles. Remember the other day when we learned the word* mistreatment? *We add letter groups at the end of the word. Those letter groups are called suffixes. The letter* y *can also be a suffix.* Predatory *describes what kind of fish the shark is. If we take out the words inside*

the parentheses, the author wrote "predatory fish." A shark is a fish and it is a predator. Does that make sense?

Charles: *Kind of. At least now I know the letter* y *is a suffix.*

Mrs. Kaholo sees how Charles is now thinking about words. She's glad she stopped to address his concerns and continues on to focus on context clues. *Now let's try another one. Go to the sidebar on the right side of the page. Follow as I read along.*

"Most sharks hatch from eggs. Great whites are born alive. Great white babies must fend for themselves. Their moms don't take care of them after they are born." (*Smalls,* December 6, 2002)

Mrs. Kaholo: *I'm not sure about the word* fend. *The sentence that includes the word* fend *doesn't help me very much. Sometimes the best hints are in the same sentence, but I don't see any good clues in this sentence. I'll look at the sentence before and after. The sentence before says,* "Great whites are born alive." *That doesn't help me figure out the meaning of the word* fend.

The sentence after tells me that the mom doesn't take care of them after they are born. Oh, I think fend *must have to do with the fact that the babies have to watch out for themselves. Let me see if that makes sense. I'm going to read the sentence again with that meaning in mind.*

Great white babies must take care of themselves. Their moms don't take care of them after they are born.

Yes, that makes sense in the sentence. Let's go back to the chart and write down that clues can also be found "in the sentence after."

Mrs. Kaholo provides guided practice for students. They work with partners to find context clues to unfamiliar words. They underline the unknown word and write their definition based on the clues they find. She reminds the students to ask themselves, "Does this meaning of the word make sense in the sentence that I'm reading?"

Afterward, Mrs. Kaholo meets with the class to go over their answers and reinforce the use of the different context clues. She asks volunteers to share the meaning of the various words. As they explain, she refers to the anchor chart and asks them to share which strategy was used.

Mrs. Kaholo provides students with another article about sharks as independent practice. She writes four words on the board and asks students to determine their meaning using context clues. She wants them to write down the meaning

Using Context Clues

Strategy/clue	Examples
in the same sentence	The great white sharks are the largest predatory (involved in hunting other animals) fish."
in the sentence after	Most sharks hatch from eggs. Great whites are born alive. Great white babies must fend for themselves. Their moms don't take care of them after they are born

of the word and the clues they used to help figure out the word's meaning. Later she will collect and analyze their work to determine if students are ready to move on to the other three context clue strategies (finding synonyms, finding antonyms, and looking for many examples). She will then add these strategies to the anchor chart. She knows that although using context clues is a hard strategy to learn, it is important for students, especially students like Charles, as they encounter more challenging text.

Teaching Use of a Dictionary

Another method for teaching word learning strategies is through the use of dictionaries. Students will need to use dictionaries, print or online, during their schooling and throughout their lives. In most cases, adults use a dictionary after a word is read in context and they are unable to determine the word's meaning. Since adults have more life experience, they are generally able to use context clues to help them select the correct meaning in the dictionary. Students, however, often have difficulty with this. They tend to select the first definition or the shortest definition. Teachers must show students how to identify and select the most appropriate meaning of the word based on how the word is used in context (Stahl & Kapinus, 2001). Students also need other skills in order to use the dictionary, such as knowing how to alphabetize and knowing how to use the guide words at the top of each page to locate specific words.

To help students learn how to select the appropriate meaning in the dictionary, teachers can use the following steps (Graves, 2006). Similar to other strategies in this book, the teacher models this process approach to solving words, and students will internalize it with more practice.

1. Read the sentence containing the unknown word.
2. Before looking in the dictionary, think aloud and guess the meaning of the word based on the clues in and around the word.
3. Explain that many words have several meanings and then read all of the dictionary's definitions for that word.
4. Decide which definition makes sense within the context of the text being read.
5. If the meaning is still unknown, provide further discussion about the context and look at word parts.

Using Dictionaries

After reading the guidelines on how to teach using the dictionary, Mrs. Kaholo realizes she needs to change her instruction. Previously, she taught students to look up words *prior* to reading the text and then students wrote the definition. She now knows that dictionaries should be used *during* reading. This allows students to discover the meaning of a word from using word parts, checking the context, and confirming their understanding. Rather than taking extensive time during the language arts lesson to teach students how to use the dictionary as a word-learning strategy, she decides to teach the strategy during a focused word study lesson. She also uses a familiar text from a previous lesson so students can focus solely on learning and applying the dictionary strategy. Mrs. Kaholo begins by providing an explanation of the strategy.

> Mrs. Kaholo: *Remember when we read the text "Goal: Ending Child Labor"? We figured out some of the unknown words by looking at meaningful word parts and using the context clues. Today we are going to talk about what you do when the word part strategy combined with context clues doesn't tell you the meaning of the word. If you still can't figure out what the word means, where else can you look? What is another resource that is available? It's something you see in almost every classroom and in many of your homes. We have several in our own classroom.*

> Charles raises his hand: *It's a dictionary. My mom uses it when she is stuck on a word in the newspaper.*

> Mrs. Kaholo: *That's right, it's a dictionary.* She posts a large wall chart titled Dictionary Guidelines and reads the information to the students. *I'm going to reread a sentence from "Goal: Ending Child Labor."* She provides a copy of the text and an age-appropriate dictionary for each pair of students.

> Mrs. Kaholo: *I noticed that many of you were stuck on the meaning of the word* campaign. *Let me show you how you can use a dictionary to help you when the other strategies do not give you enough information to figure out the meaning of the word.*

> *Using the guide words we learned about, the words at the top of each page, find the page that has the word* campaign. She walks around the room and scaffolds as needed while making a mental note as to who might need further work with guide words.

> *Follow along while I show you what I do when using word parts and context clues does not help me figure out the meaning of the word. First, I'm going* to *reread*

the sentence where the word is found. In paragraph 4, the sentence is:

"But a campaign to stop child-labor abuse has paid off."

The first step on our Dictionary Guidelines chart tells me to make a guess as to the meaning of the word based on the words in and around the sentence. It's something that stops child labor from happening. Hmmm. I'm still not sure exactly what it means. So I'm going to move to step 2.

Step 2 tells me to read all the definitions provided in the dictionary. The first definition is about a military operation. This sentence is not about military things, although they are fighting against child labor. Maybe the military is involved in the fight. I'm confused, but I'll keep reading all the definitions. I'll pick the one that makes the most sense.

The second definition is about planning a series of steps for a specific purpose. Hmmm. That seems to fit with the need to stop child labor, but I had better read on to see what the other definitions are. The third definition says, "steps to win a political election, like a mayoral or presidential election." *The sentence and the words around it are not about an election process. I think the second definition makes the most sense in the sentence because people were working for a purpose and that was to stop child labor. I choose the second definition.*

Mrs. Kaholo talks about how the Dictionary Guidelines helped her and the challenges she encountered.

It was hard to predict the meaning of the word campaign, *but I gave it my best try using the clues in the text. I forced myself to read all the definitions even though I thought the second definition was the correct one. I was right, but I'm glad I read on because there could have been a better definition listed.*

Mrs. Kaholo models another example. The students appear to have understood the concept, and she decides to give them another word and guide them through the process.

Mrs. Kaholo: *With your partner, I would like you to read paragraph 7 and follow the Dictionary Guidelines to determine, or figure out, the meaning of the word* harvest. *Mrs. Kaholo writes the sentence on the board.*

"From sunup to sundown, they harvest and haul."

She rotates around the room, checking on the pairs and providing support as needed. The students are hearing rich and varied language from their peers. Her students are more engaged in oral discussions compared with the beginning of the school year. Though she knows these oral discussions are indirect teaching, she also knows that they will benefit from these experiences.

After the guided practice, she asks volunteers to share their definition of the word *harvest* with the class. The students explain the steps they took that helped them determine the meaning.

Mrs. Kaholo assigns more words and gives students the option to continue working in pairs or independently. At the end of the lesson, the whole class reflects upon their learning, and they talk about which steps were most helpful in selecting a definition and which were the most challenging.

Vocabulary Activities

This section of *Teaching Vocabulary Explicitly* contains a variety of activities to support teaching individual words explicitly and to actively involve students in processing their learning. The activities fit nicely within the vocabulary program (as described in the purpose section of each activity) and can also be used during a language arts lesson. They can also serve as quick "sponge" activities, which are activities that can be done in a few minutes during transitions between lessons or at the end of the day. The activities are meant to provide teachers with additional ideas for motivating students to review their vocabulary.

In any reading lesson, the most important activity is giving students time to read connected text. Duffy (2003) explains, "Connected text is text that contains a coherent message. A story is an example of connected text; a chapter in a social studies book is connected text; a newspaper article is connected text" (p. 6). The activities listed here are supplemental to the connected reading that students do every day. They are not meant to take the place of the concentrated reading time that needs to be a part of each day.

Glossary Bookmark

Purpose: To provide the students with a reference containing the key vocabulary words to use during reading. Ideally, you'll want to create bookmarks for texts that will be used over an extensive amount of time (for example, a bookmark for each chapter). The bookmark is ideal for teaching student-friendly definitions.

Procedure: Print the potentially challenging words from the text on a bookmark strip. Next to each word, provide a student-friendly definition and the sentence used in the text. Another option is to have students write in this information. (Graves, 2009; PREL, 2008)

Level 4 –Vocabulary

angler (noun)   a person who fishes

expedition (noun)   a trip to find out about something

female (noun)   a girl or woman

male (adjective)   having to do with men or boys

tuna (noun)   a fast-swimming fish that lives in the sea
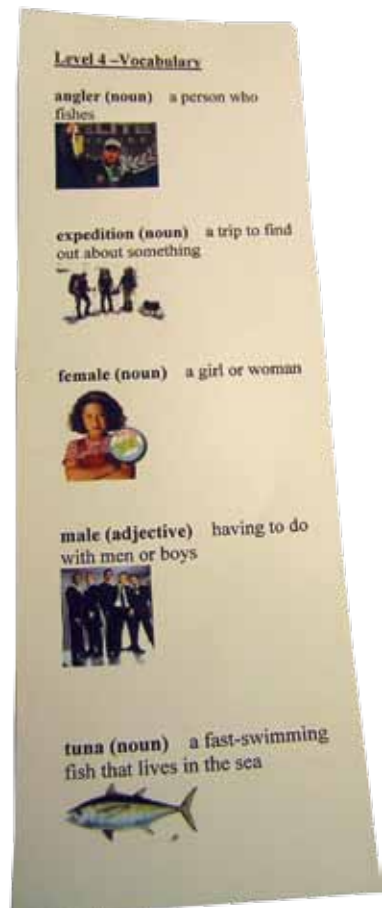
Vocabulary Checks

Purpose: To determine students' understanding of vocabulary before, during, and after explicit instruction about the vocabulary. Vocabulary checks are ideal for helping students understand words in context and as a formative assessment.

Procedure: Students rate their understanding of a word prior to explicit instruction and prior to reading the text. This is a quick formative assessment that helps teachers know which words may

require additional instruction. The teacher then provides explicit instruction and asks students to write the meaning of the word, use it in a sentence, and sketch a picture to help anchor their understanding. At the end of the lesson (or unit of study), students self-assess their understanding of the word. (Hiebert & Smith, 2008)

Vocabulary Record

Purpose: To reinforce word knowledge throughout the lesson. The Vocabulary Record provides a nice scaffold for students to demonstrate their understanding during each step of explicit vocabulary instruction.

Procedure: The teacher provides explicit vocabulary instruction. After each step—providing student-friendly definitions, using the word in context, providing multiple exposures, and offering opportunities for active involvement—the teacher provides time for students to process the information. They write a personal definition of the word, they make a sketch of what the word means to them to help them remember the word, and finally, they write a sentence. Each student's vocabulary record is added to his or her Vocabulary Notebook, which serves as a repository of all the words the student has been taught. At various times, the teacher can ask the students to revisit the vocabulary records in their notebook and participate in activities like I Spy or I'm Thinking of … as described below. (Hiebert & Smith, 2008)

I Spy: The teacher starts the game by saying, "I spy a word that means 'hard work' or 'effort'" (*labor*); "that means 'to get rid of' or 'destroy'" (*eliminate*); "that uses a prefix that means 'wrongly'" (*mistreat*); and so on. Students can use their vocabulary notebook to find words.

I'm Thinking of …: The teacher starts the game saying, "I'm thinking of … a word that means 'to lower the body close to the ground by bending the legs'" (*crouch*); "… a word that means 'the opposite of visible'" (*invisible*); and so on.

Identifying Tricksters

Purpose: To help students understand which words have a prefix and which do not. Words that have a group of letters similar to a prefix are known as tricksters. Identifying tricksters is an ideal activity when teaching word-learning strategies.

Un -	Tricksters (words that begin with 'un' but are not prefixes)
Unfeeling unclean uncook uncommon unarmed uncertain undoing	Under uncle underground underhand underpants underwater under went

Procedure: The teacher provides explicit instruction on a prefix (for example, *un* means "not") and gives examples of words using the prefixes (for example, *uncommon, uncertain*). Next, the teacher shows examples of words that have the same letters as the prefix but that are not used in the same manner (for example, *uncle, under*). Students draw a T-chart (a two-column chart). On the T-chart, students label one column "Un-" (or "Pre-," "Re-," and so on) and the second column "Tricksters." The teacher then provides a list of words or has students refer to a page in the dictionary. Students work in pairs to figure out which word has a prefix and which one is a trickster. Then they write the word in the appropriate column. Each pair shares their answers with the whole class. Students may call out "Challenge" if they feel that a word has been placed in the incorrect column (for example, the word *undetermined* is written in the Trickster column instead of the Un- column). To solve the challenge, students must break apart the word to its base form and figure out the meaning, then check if a prefix has been used. Initially, teachers will need to model how to resolve the challenge.

Which Prefix? Word Wall

Purpose: To provide students a reference tool for different prefixes that have similar meanings. Which Prefix? is an ideal activity when teaching word-learning strategies.

Procedure: Prior to the lesson, the teacher designates a space for the Word Wall and cuts out small pieces of papers for students to write words on. The day of the lesson, the teacher provides explicit instruction on two prefixes with similar meanings (for example, the prefixes *dis* and *un* both mean "not").

She or he offers two or three examples of base words and helps students figure out which prefix should be used, for example, by asking, "Which is correct, *unhappy* or *dishappy*?" The teacher then provides a list of base words and has students work in small groups to determine which prefix goes with each base word. The groups share their examples with the whole class. The teacher writes the words on the small pieces of paper and then places them on the Word Wall. There are many prefixes that have similar meanings (for example, *un, dis, in,* and *im* all mean "not"), so the lesson may continue over several instructional periods. Ideally, the teacher should teach no more than two prefixes during an instructional period.

Connecting Vocabulary to Writing

Providing opportunities for students to apply their learned vocabulary from reading to writing will increase their likelihood of thoroughly understanding the word's meaning. According to Graham and Hebert (2010), students' reading comprehension is improved when they are given opportunities to write about what they read, are taught the writing skills and processes to create text, and are given increased time to engage in writing activities. For example, students may write responses, make personal connections, or summarize the text using their newly learned vocabulary (Graham & Hebert, 2010).

Mrs. Kaholo reflects on what she has learned about the explicit teaching of vocabulary and word learning strategies. She wonders how to provide students with further reinforcement for understanding new vocabulary because it takes several exposures to the word before they have a deep understanding. She has read that vocabulary can improve comprehension when students receive rich and extensive instruction along with multiple opportunities to learn words (Stahl, 1999).

She thinks about the reading-writing connection. She knows that reading and writing are recursive processes: "The more students read, the better they write; the more they write, the better they read" (Duffy, 2003, p. 7). Mrs. Kaholo thinks writing activities will increase opportunities for her students to have rich and extensive encounters with targeted words. She will encourage her students to write using the targeted words after they read text. This will reinforce key vocabulary and help students grow in their reading and writing. She also realizes that incorporating writing into other content areas will help students learn vocabulary at a deeper level.

She reflects on the lesson in which she used the article "Goal: Ending Child Labor." She plans to have her students write about what they learned by prompting them with essential questions, for example, "Should child labor be ended? Why or why not?" She believes students will be ready to explain their answers and can use the targeted words: *misuse, mistreatment, eliminate,* and *exist*. Providing opportunities for students to write will reinforce the meaning of the vocabulary she explicitly taught and will also cause students to think deeply about content. In addition, she will be able to see if her students fully understand the vocabulary by the way they use it in their writing.

Conclusion

Mrs. Kaholo has increased the number of tools she has for guiding students in their reading and vocabulary development. She has learned how to select and explicitly teach key vocabulary prior to asking students to read a text. She knows how to teach students to use independent word learning strategies, such as using meaningful word parts, context clues, and the dictionary to figure out the meaning of unknown words. She has made a commitment to combine writing with reading to ensure further learning for her students at the personal and individual levels. She knows there is still much to learn but feels she is better equipped to help Charles and students like him to become successful readers.

Overview of Key Steps

- The essential components of vocabulary instruction are providing rich and varied language experiences, teaching individual words, teaching word-learning strategies, and fostering word consciousness (Graves, 2006).

- Students grow in their vocabulary when they are exposed to new vocabulary through activities such as reading aloud and independent reading.

- Encouraging students to be word conscious helps them become lifelong learners of new words.

- Explicit instruction of carefully selected words helps students understand content-specific texts.

- The steps for teaching individual words explicitly are: (1) providing a student-friendly definition, (2) using the word in context and giving contextual information, (3) providing multiple exposures, and (4) offering opportunities for active involvement (Beck, et al., 2002; Graves, 2006; NICHD, 2000; PREL, 2007, 2008).

- Instruction in word-learning strategies provides students with the strategies and skills that enable them to figure out the meaning of unfamiliar words and increase their word knowledge.

- The word-learning strategies that provide students with the skills and strategies to figure out the meaning of unfamiliar words and increase their word knowledge are: (1) knowing how to identify and use context clues, (2) knowing how to use word-part information, and (3) knowing how to use the dictionary (Baumann, et. al., 2003; NICHD, 2000).

- The three key components for integrating the teaching of word parts into a vocabulary program are: (1) providing students with general knowledge of prefixes, suffixes, and root/base words; (2) teaching meaningful word parts explicitly as the need arises; and (3) teaching different strategies for analyzing a word's parts using a process approach.

- When students use their new vocabulary in writing connected text, they gain a deeper understanding of the targeted words.

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Appendix A: Determining Vocabulary Words to Teach Explicitly

This tool can be used to help determine which words need explicit teaching, which can be taught "on the run," and which need not be taught at all. ("On the run" means the word is quickly defined by the teacher just before reading or at the time it is needed.)

Word	Criteria			Instruction
List words you selected from the text in the boxes below	For each word, check **YES** or **NO** based on the following questions. 1. Is the word too difficult to understand without any background knowledge? 2. Is the word critical to comprehending the text? 3. Is the word a content and/or process word that explains a concept or topic? 4. Are the context clues lacking or too difficult to understand the meaning of the word? 5. Is the word likely to be found in future reading? *If you answer YES to three or more questions, the word may need explicit vocabulary instruction. If you answer NO to three or more questions, the word can be taught on the run or not taught at all.*			Circle the type of instruction this word needs. • **EVI:** Explicit vocabulary instruction • **OTR:** On-the-run instruction • **NI:** No instruction; students can determine meaning
1.	**Criteria**	**YES**	**NO**	• EVI • OTR • NI
	Requires background knowledge?			
	Critical to comprehending the text?			
	A content and/or process word that explains a concept or topic?			
	Context clues are lacking or too difficult to understand the meaning?			
	Will be used in future reading?			
2.	**Criteria**	**YES**	**NO**	• EVI • OTR • NI
	Requires background knowledge?			
	Critical to comprehending the text?			
	A content and/or process word that explains a concept or topic?			
	Context clues are lacking or too difficult to understand the meaning?			
	Will be used in future reading?			
3.	**Criteria**	**YES**	**NO**	• EVI • OTR • NI
	Requires background knowledge?			
	Critical to comprehending the text?			
	A content and/or process word that explains a concept or topic?			
	Context clues are lacking or too difficult to understand the meaning?			
	Will be used in future reading?			

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Appendix B: Strategies for Teaching Individual Words Explicitly

This tool is used to ensure that the four strategies of teaching individual words explicitly are captured.

Word:	
Student Friendly Definition – The teacher uses everyday language to help students understand the meaning of the word. It is specific and elaborate and connects to what the students know.	
Context – The teacher reads aloud the sentence/s containing the word and sentences that offer contextual clues, then directs students to locate the word/sentences.	
Multiple Exposures – The teacher provides examples for students to see the word used in different contexts. through examples pictures, and relationships.	
Active Involvement – The teacher engages all students in a quick activity/game that helps them process the word's meaning.	

Word:	
Student Friendly Definition – The teacher uses everyday language to help students understand the meaning of the word. It is specific and elaborate and connects to what the students know.	
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Active Involvement – The teacher engages all students in a quick activity/game that helps them process the word's meaning.	

Adapted from Graves, 2006; PREL, 2007.

Appendix C: Active Involvement Activities for Vocabulary Development

These activities promote active involvement to help students process new vocabulary. Examples given are based on the word *submerge* (adapted from Beck, McKeown, & Kucan, 2002; PREL, 2007).

1. **Thumbs up/down**
   The teacher makes a statement using the targeted vocabulary words. Students show a "thumbs up" if they agree and a "thumbs down" if they disagree.

   Examples:
   - It is good for a computer to be submerged in water.
   - The scuba diver was completely submerged.

2. **Have you ever?**
   The teacher asks a question starting with "Have you ever …" to determine if students have experience using the vocabulary word. Students will stand up if they have had the experience or remain seated if they have not.

   Examples: Have you ever …
   - Submerged a dish?
   - Submerged a pig in water?

3. **Silly Questions**
   The teacher asks a silly question using the vocabulary word. Students will turn to a partner and share their answers.

   Examples:
   - When is a chair submerged?
   - When is a piece of pizza submerged?
   - When is a teacher submerged?

4. **Applause, Applause**
   Students will clap to show if they would enjoy the experience.

   Examples:
   - Would you enjoy discovering a submerged sunken ship?
   - Would you enjoy submerging yourself in mud?

5. **Turn and Talk**
   Students turn and talk to a partner using the vocabulary word in a complete sentence.

   - Tell your partner about a time that you have been submerged.
   - Tell your partner about an object you have submerged or you have seen submerged.

Appendix D: Vocabulary Check

Name _____ Date _____

Text _____

Vocabulary Check

Word	My first understanding ☐ I have never seen the word before. ☐ I have heard the word before, but I do not know what it means. ☐ I recognize how the word is used in the text and it has something to do with _____. ☐ I know the word well.
Meaning	**Use the word in a sentence.**
Sketch a picture to help you remember the word	**After learning more about the word …** ☐ I am still a little confused about the meaning of the word. ☐ I know the meaning of the word and understand how it is used in the text. ☐ I know the meaning of the word and need help from a partner (or teacher) to create different sentences. ☐ I am confident that I can use the word to create different sentences.

Adapted from Hiebert & Smith, 2008.

Appendix E: The Most Common Prefixes in Printed English for Grades 3–9

Rank	Prefix	Definition	Sample Words	Percentage of All Prefixed Words
1	un	not	unhappy, unafraid, undefeated	26
2	re	again, back	recede, regress	14
3	in, im, il,	not	invisible, impolite, illegal	11
4	dis	not	dislike, disengage, discomfort, disentangle	7
5	en, em	in, into, cover	entangle, empathy	4
6	non	not	nonfiction, nonstop, nonsense, nonviolent	4
7	in, im	in	incorporate, include, inhale, infect	3
8	over	above, beyond	overdue, overpriced, overactive	3
9	mis	wrongly	misbehave, misconduct, mistake	3
10	sub	under, beneath	submarine, subject, subhuman	3
11	pre	before, prior	precede, predict, preview, prehistoric	3
12	inter	among	international, intervene, interstate, Internet	3
13	fore	before, in front of	forewarn, forearm, forenoon, foreshadow	3
14	de	downward, undo	descend, decrease, degrade, depart	2
15	trans	across	transport, transatlantic, transfer, translate	2
16	super	above, beyond	superman, superior, supernatural, supervise	1
17	semi	half	semiannual, semicircle, semiconscious	1
18	anti	against, opposed	antiwar, antisocial, antifreeze, antislavery	1
19	mid	middle	midsemester, midnight, midway, midsummer	1
20	under	too little	underpaid, underfed	1

Adapted from White, Sowell, & Yanagihara, 1989; PREL, 2007, 2008.

Appendix F: English Suffixes Ranked by Frequency of Occurrence

Rank	Suffix	Explanation	Sample Words	Percentage of All Prefixed Words
1	s, es	plural	boys, boxes	31
2	ed	past tense	wanted, tested	20
3	ing	present tense	playing, singing	14
4	ly	characteristic of	friendly, loudly	7
5	er, or	someone who does	teacher, singer, doctor, actor	4
6	ion, tion, ation, ition	state or quality of	companion, champion, attention, caution, inspiration, starvation, intuition	4
7	able, ible	is, can be	likeable, comfortable, terrible	2
8	al, ial	action or process; relating to	refusal, revival, natural, royal, commercial, remedial	1
9	y	characterized by, being or having, state or quality of	funny, fruity, sunny	1
10	ness	state of being	kindness, happiness, goodness	1
11	ity, ty	state or quality of	necessity, civility, loyalty, honesty, unity	1
12	ment	action or process	enjoyment, experiment, government, development	1
13	ic	having characteristics of	comic, historic, public	1
14	ous, eous, ious	like, full of, state or quality of	joyous, nervous, gracious, religious, righteous	1
15	en	to make; adjective suffix; verb suffix	strengthen, fasten, weaken; stolen, chosen; eaten, frozen	1
16	er	one who	teacher, painter, seller, shipper	1
17	ive, ative, tive	inclined to	active, negative, positive, talkative,	1
18	ful	full of, tending toward	joyful, fearful, careful, thoughtful, cupful,	1
19	less	without	thoughtless, tireless, joyless, ageless, careless	1
20	est	most	smartest, closest, lightest, smallest, fastest	1

Adapted from White, Sowell, & Yanagihara, 1989; PREL, 2007, 2008.

Appendix G: Common Greek and Latin Roots in English

Root	Meaning	Origin	Examples
aud	hear	Latin	audiophile, auditorium, audition
astro	star	Greek	astrology, astronaut, asteroid
bio	life	Greek	biography, biology
dict	speak, tell	Latin	dictate, predict, dictator
geo	earth	Greek	geology, geography
meter	measure	Greek	thermometer, barometer
min	little, small	Latin	minimum, minimal
mit, mis	send	Latin	mission, transmit, remit, missile
ped	foot	Latin	pedestrian, pedal, pedestal
phon	sound	Greek	phonograph, microphone, phoneme
port	carry	Latin	transport, portable, import
scrib, script	write	Latin	scribble, manuscript, inscription
spect	look	Latin	inspect, spectator
struct	build, form	Latin	construction, destruct, instruct

Adapted from Stahl, 1999, p. 49.

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