

SAMPLE CHAPTER

Teach Students How to Figure Out Words They Don't Know

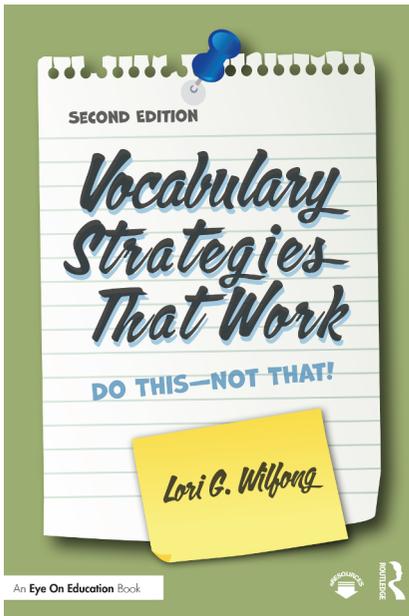
(Beyond Context Clues!)



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Contents



1. Teach Students Morphological Strategies to Figure Out Words They Do Not Know

By Lori G. Wilfong

from Vocabulary Strategies That Work: Do This— Not That!



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Teach Students Morphological Strategies to Figure Out Words They Do Not Know, in Addition to Context-Clue Strategies

Sarah threw down her book in anger during our conference. "I just don't know what this word means!" she exclaimed, after my repeated prompting to use context clues to figure out the meaning. "I read the sentence over and over again to myself, but the meaning doesn't magically come to me. The sentence just doesn't help. What else can I do besides skip it?" She looked up at me with pleading eyes. "It seems like an important word, and it is hard for me to move on when I know I don't know what it means."

Why This Item Is Important

Sarah's frustration played out over the course of the year during our Readers Workshop conferencing. She was an inquisitive, bright girl who wanted to know everything, and not knowing the meaning of a word on a page annoyed her to no end. We had talked as a class about context clues as a means for figuring out these words, but Sarah was right; there

were definitely sentences when going back and rereading the sentence did not help. Allen (2010) points out the reason for this: In fiction texts, local context (the rest of the sentence containing the unknown word) is reliable in only about one in 20 sentences when trying to figure out an unknown word. Nonfiction texts are often best at using context clues to help a reader untangle a new word; these texts often set apart the definitions of important vocabulary using commas within the sentence, clearly signaling to the reader, "Here's the definition!" In most fiction, however, the reader often needs more than just localized context clues to figure out an unknown word. They might need to go back and reread an entire paragraph (something many of our struggling readers are reluctant to do), or they need to continue reading in hopes that the word is explained further on (something readers like Sarah refused to do).

Arming students with strategies to figure out unknown words independently is imperative. Direct instruction on vocabulary terms by an expert teacher yields a student about 350 new vocabulary words in an academic year; however, students need to learn between 3,000 and 5,000 new words every year to move a grade level in terms of reading progression (Baumann, Edwards, Boland, Olejnik, & Kame'enui, 2003). Helping students recognize which strategy to use to figure out these words will enable them to reach the critical mass of words needed to be an expert reader.

Do This—Not That principle #6: DO help students learn to use strategies to figure out the meanings of unknown words independently; DON'T prompt students to use only context clues.

To Get Started

Morphology, the study of Greek and Latin roots, and the use of context clues should not be an either-or situation when it comes to vocabulary instruction. A powerful quote emphasizes this point:

For every word a child learns, we estimate that there are an average of one to three additional related words that should also be understandable to the child, the exact number depending on how well the child is able to use context and morphology to induce meanings.

(Nagy & Anderson, 1984)

Both strategies provide students with tactics to figure out unknown words. When updating instructional practices, be sensitive to the fact that one cannot be sacrificed at the expense of another. However, the content area that tackles each strategy is up for debate. As stated before, nonfiction texts, emphasized in content areas like science and social studies, are often the best place to show how authors utilize context clues to help readers learn difficult vocabulary. In addition, content areas like science and math have an abundance of vocabulary words that reflect Greek and Latin roots. So why does the burden of instruction always seem to fall on the language arts teacher? We want students to see the connections of both cuing systems in all kinds of texts and across all content areas. Here is an ideal instructional scenario:

1. One teacher (generally, the language arts teacher) supplies the initial instruction in the different types of context clues and a variety of root words over the course of the year. Students are provided time in this class to apply this new knowledge to their self-selected and guided texts.
2. Other content teachers use “teachable moments” to highlight the occurrence and need for these strategies within their own texts. For example, if the root *tri* was introduced during word study in language arts, this would be a perfect time for the math teacher to show students the application of the root in math while talking about the different types of triangles.

Of course, to make this scenario work, teachers across content areas must carefully plan and have explicit dialogue. It behooves a team of teachers working with the same group of students to sit down and pace the list of Greek and Latin roots to be taught in language arts in such a way that they are mirrored in another content area (math, science, social studies, and specials) so that students get an immediate cross-curricular connection.

Updated Strategy #1: Teaching Each Type of Context Clue Specifically

Beers (2002) is very clear on context clues with struggling readers; she explains that teachers must first show students the different types of context clues and then give readers time to identify and use these different types to figure out unknown words. Many teachers give the directive I gave Sarah in the introduction, “Use the context!”, but for a struggling reader, this directive is even more of a mystery than the unknown word. Some teachers go on to explain at least what the word *context* means, and for good readers, this might be enough. For dependent readers, teachers need to go further.

Experts disagree on the number of types of context clues—a search yielded between four and six types. Here are the four basic types:

1. **Synonym:** A word with the same meaning is used within the same sentence.

Example: The morning’s rainstorm dissipated when the clouds separated and disappeared to the north and south.

2. **Antonym:** A word or group of words that has the opposite meaning reveals the meaning of an unknown word.

Example: She thought her husband would like her new haircut, but he loathed it.

3. **Explanation:** The unknown word is explained within the sentence or in a sentence immediately preceding or following.

Example: The geologist, a person who studies rocks and minerals, bent low over the ground with his magnifying glass, eager to get a closer look at the specimen.

4. **Example:** Specific examples are used within the sentence to help define the unknown word.

Example: Constellations, such as the Big Dipper and Orion, can be seen in the night sky.

The following instructional routine supports the instruction and practice of the four basic types of context clues across content areas:

- ◆ A teacher introduces students to one type of context clue. Several examples are shown of how authors employ this type of context clue in their writing. Think alouds are important here. When students come to a word they don’t know, they often do not have a process in place for working through an unknown word. If a teacher models his or her thinking while applying the knowledge of the context clue to the word, it helps frame the process for struggling readers.
- ◆ Through guided practice, students work with a partner or small group to find this type of context clue in select class texts. Using worksheets or isolated text does not support students in grasping how to apply this new knowledge.
- ◆ Students are prompted to use a specific type of context clue when figuring out unknown words in self-selected reading. Beers (2002) strongly emphasizes this point; rather than saying “Use your context clues,” the teacher prompts, “That looks like the example type of context clue. Can you see how the author uses this to help you figure out that word?”

- ◆ Students are prompted to use context clues in their own writing. For example, if students have just learned about the synonym type of context clue, the next writing mini-lesson could be how and why to work this into an informative writing piece. This takes the skill from simply identifying context clues to applying the new knowledge.
- ◆ To support the instruction of the primary teacher, other teachers identify examples of the explicit context clue in the texts they will be using. Students can be prompted to use the context clue, and teachers can model using the context clue to think aloud through the meaning of the word across content areas.

A point that will be underscored repeatedly in this chapter is time for a team of teachers to talk while planning instruction around these topics. In the case of context clues, the planning is simple; the primary teacher responsible for the initial instruction informs his or her teaching partners that during this particular week or period, they will be covering this type of context clue. It is then up to the rest of the team members to touch upon it in their own teaching, knowing that if they do it well, students will be more likely to understand and apply the concept.

Updated Strategy #2: Teaching Students Greek and Latin Words to Figure Out Unknown Words

If you need a few reasons to consider implementing the teaching of Greek and Latin roots in your classroom, consider these points:

- ◆ Sixty percent of multisyllabic words in the English language are derived from Greek and Latin (Bromley, 2007).
- ◆ A single Greek or Latin root can help students understand 20 or more English words (Rasinski et al., 2010).
- ◆ Because Spanish is a derivative of Greek and Latin, the study of their roots in the English language may be helpful to English Learners whose native language is Spanish or other Romance languages such as French and Italian (Rasinski et al., 2010).
- ◆ In the Common Core State Standards, Greek and Latin roots appear as early as grade one, where students are asked to “use frequently occurring affixes as a clue to the meaning of a word” (NGA/CCSS, 2010).

Now that the “why” of teaching Greek and Latin roots is out of the way, let’s address the “how” through a series of questions:

- ◆ How do I decide which Greek and Latin root words to teach?

Different schools approach this question in three ways:

1. Prepackaged programs exist that provide weekly lessons on one or two roots per week, along with strategies and assessments to create an instructional routine. Some are even leveled so that grade levels can build on a previous year's knowledge as students acquire new word parts. While these provide ease in planning, they can be disconnected from the students' learning in other areas (for example, the student is studying Greek and Latin body parts in language arts but is not applying the knowledge of these roots anywhere else in the curriculum). I would urge schools that take this route to work to ensure that the roots being studied as part of the program are highlighted and enhanced in other curricular areas.
2. Other schools pace a list of root words among grade levels. Foundational root word knowledge is presented in lower grades and built upon in successive grades. These lists can often be more responsive to curricular needs; time will end up being the most precious commodity as many different voices from content areas need to be represented in order to select and structure these word lists to reflect a variety of content areas at appropriate times throughout the year. A starting place with this approach should be a list of common Greek and Latin root words; this gives teachers a basis to begin the search through their own curricula for appropriate words to add to the school or grade level list (a sample list for your own use is included at the end of the chapter).
3. A final approach is more content isolated; teachers look at their own curricula to select and highlight Tier 2 or 3 words that contain Greek and Latin roots and plan to teach these words and word parts when they appear throughout the year. The key to this approach is having a common word study routine with these words so that students can spend their brainpower learning and applying their new word knowledge and not learning a new word routine with each content area teacher (suggestions for such a routine with word parts follows).

Whichever approach you or your school or school system takes, it is important to be consistent. Any program must be implemented with fidelity; lists developed by grade levels across content areas must be followed, and a more holistic approach, like the one described in 3, should be shared and discussed across grade levels.

- ◆ How do I establish a routine for studying Greek and Latin roots in my classroom?

Several of the word study strategies presented in this text can be used to study words with Greek and Latin roots; Concept Maps, Alike but Different, and Vocabulary Reader's Theater (Chapter 5) can all be used to help students explore and take ownership of words with Greek and Latin roots. What follows in this section are three instructional strategies that work particularly well when studying a specific root:

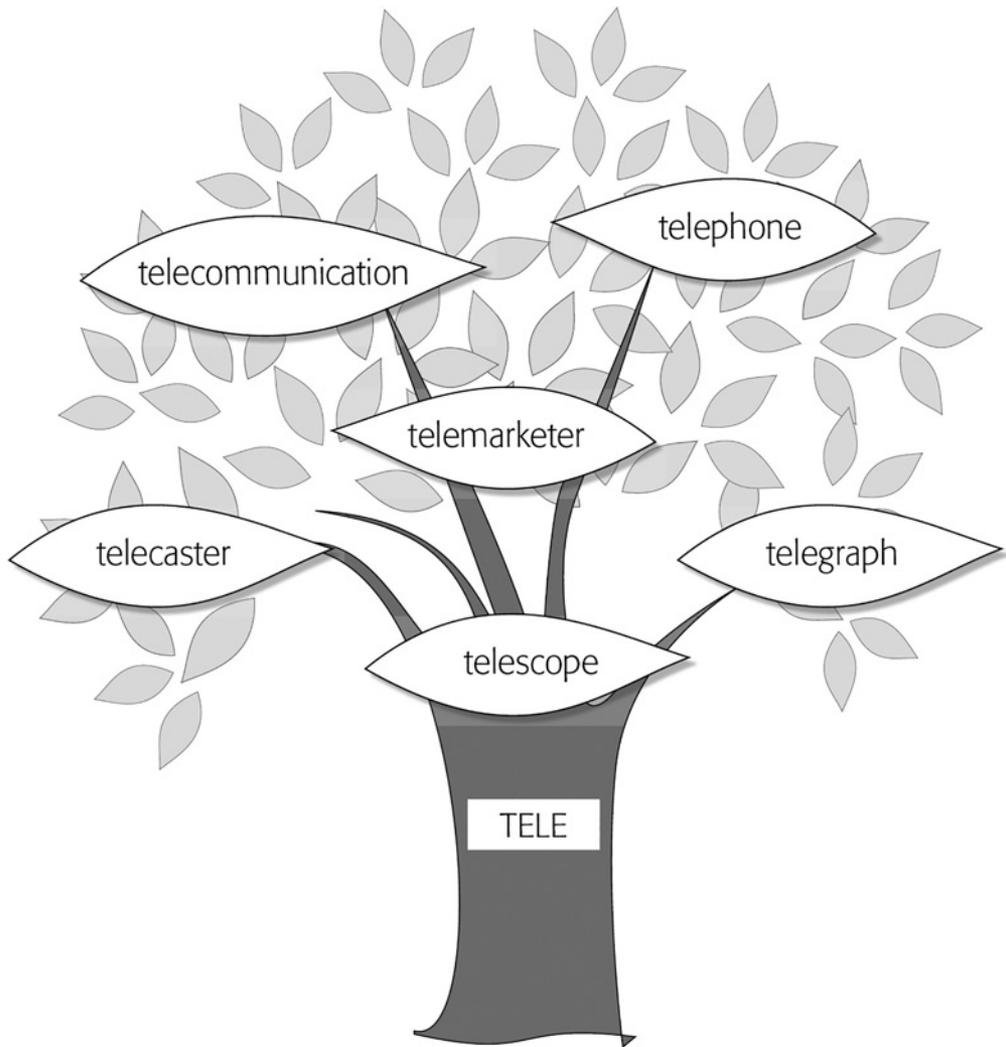
1. **The Root Word Tree** (Bromley, 2007): The root word tree is a strategy that helps students do exactly what Nagy and Anderson were addressing in their quote earlier in this chapter—if students know a word (or a word part, in this case), they are able to use this transactional knowledge to learn about other words. Generative strategies that help students to unlock the meaning of one word by understanding the root and then applying that understanding to other roots is a time efficient way to help grow student vocabularies (Flanigan, Templeton, & Hayes, 2012). The sample shown in Figure 6.1 came from a seventh-grade science teacher. All the seventh-grade teachers had come together to create a list of words that crossed content areas. They paced the words so that different content areas were responsible for teaching the roots that were featured in their content throughout the year. In a unit about astronomy, the word *telescope* was featured. The science teacher presented the root word *tele* to his seventh graders. With a partner, they brainstormed as many different words as they could think of that contained the root *tele*. He passed out the Root Tree graphic organizer (Figure 6.1) to his students so they could fill it in (a blank template is on page xx).

After students filled in the graphic organizer, they used their sample words to come up with a meaning for the root *tele*.

One grade level that was working on Greek and Latin roots decided to take the idea of root word trees to the next level; they created butcher-paper trees in the hallways between their classrooms and let each branch represent a different root they were studying. During the week, as students came across or brainstormed words that contained this root, they wrote the word on a leaf that contained the root. The trees “bloomed” across the hallways, a constant visual reminder of the interconnectedness of Greek and Latin roots! Photo 6.1 shows some great ways teachers made Greek & Latin roots come to life in their classrooms.

It goes without saying that there are some roots that are easier to generate a variety of words with. A great resource for lists of words

Figure 6.1 Sample Root Word Tree Using *Tele*



using different root words is www.membean.com. The website has morphology “trees” with crowdsourced words.

2. **Word Sorts** (Fisher, Brozo, Frey, & Ivey, 2011; Fisher & Frey, 2011): Word sorts are a great way to introduce, reinforce, and assess students’ knowledge of Greek and Latin roots. In creating their word study routine, the teachers at Maple Heights City Schools use word sorts twice. When a new root is being introduced, students are

Photo 6.1 Root Word Flowers in an Intermediate Classroom

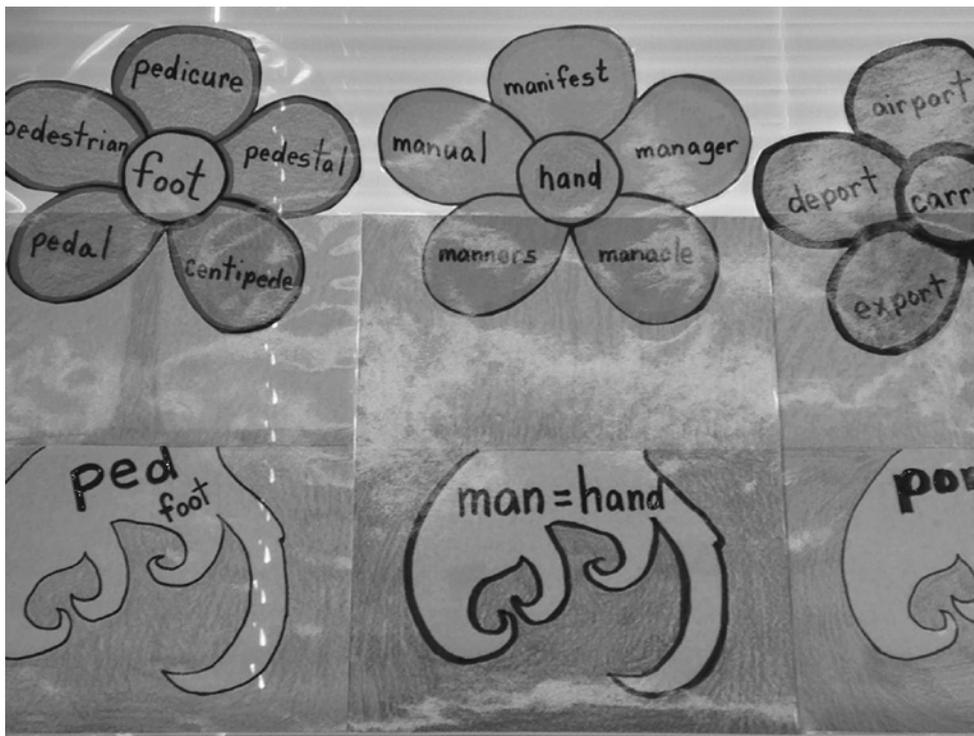


Figure 6.2 Words for an *-arch* Word Sort

archangel	monarch	myriarch
archenemy	anarchy	biarchy

handed an envelope. In the envelope is the root in a variety of words on individual slips of paper. Individually or with a partner, students are asked to sort the words in a way that makes sense to them, often before they are told what the root means. A sample of word study slips using the root *arch* in seventh-grade social studies is shown in Figure 6.2.

Many students see the six words shown in Figure 6.2 and put the words that have *arch* in the beginning in one column and the

others in another column. Others might sort them into words they know (in this particular class, many students knew *monarch* and *archangel*) and words they are not familiar with. No answer is right or wrong in an initial sort; instead, students must be able to provide a rationale for why they sorted them that way *based on the root*. This is italicized for a reason; sorting just for the sake of sorting (alphabetical, shortest to longest) does not help students in learning about a new root word!

Later in the week, after students have been introduced to the meaning of the root word and have had experience brainstorming other words with the root (with the Root Tree!), the word sort envelopes come out again. This time, the sorting is more purposeful and quick, allowing the students to demonstrate that they have learned the meaning of the root.

1. **Wordo** (Fisher et al., 2011): Wordo (think bingo) is a fun game that allows students to apply their knowledge of a single root to multiple words. Students receive a game card with derivatives of a single root on it. I highly recommend having the game cards already made up for the students instead of giving them a blank grid to fill out (the result is often more time spent filling in the game card or cheating than actually playing the game!). Technology (www.teach-nology.com/web_tools/materials/bingo/) has a great, free bingo card generator that allows you to input the words of your choice into a template and create multiple cards at the push of a button. Figure 6.3 shows a sample of a card using the root *port*.

Figure 6.3 Sample Wordo Card

Airport	Comport	Deport
Export	Import	Important
Misreported	Opportunist	Passport

To play Wordo, the teacher (or a student, once the class gets comfortable with the definitions) calls out a certain type of bingo game, such as four corners, diagonal, vertical, or horizontal line. He or she then calls out the different definitions of *port* words, pausing to allow students to mark off the words on their cards. When a student reaches the designated shape, he or she calls out “Wordo!” This simple review game is a fun way for students to show definitional knowledge of their Greek and Latin root words.

A Root Word Routine

Figure 6.4 Root Word Routine—Choose One to Two Strategies From Each Column for Each Root You Introduce

Introduce the Root	Review the Root	Assess the Root
Word sort Word tree Frayer Model	Vocabulary Reader’s Theater Alike but Different Wordo Sketch to Stretch Flipgrid video Padlet	Word sort Word tree Frayer Model Multiple choice question Use words in context while reading about topic

Including a routine in a classroom for the study and use of root words is a great way to help students do more than just memorize the definitions for an assessment. Figure 6.4 suggests a way to organize the strategies presented in this chapter to provide structure in the teaching of root words.

Common Core Connection

The strategies just presented fit well with a variety of standards in the Common Core State Standards. They are presented by grade level and content area in Figure 6.5.

Figure 6.5 CCSS Standards Addressing Context Clues and Greek/Latin Roots

Grade Level	4	5	6
Standard Addressed	<p>Language Standard Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 4 reading and content</i>, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., <i>telegraph, photograph, autograph</i>). c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms). 	<p>Language Standard Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 5 reading and content</i>, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., <i>photograph, photosynthesis</i>). c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. 	<p>Language Standard</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., <i>audience, auditory, audible</i>).

Action Steps

The teaching of specific context clues and Greek and Latin roots enhances students' knowledge of vocabulary across content areas. Take some action:

1. Tackling both the teaching of context-clue types and Greek and Latin root words at the same time can be overwhelming. Either with your teaching team or individually, decide which word attack strategy you will introduce first. Why did you choose this strategy?

2. If you chose context clues, you have a few ideas to consider:

- a. In what order will you teach students the context-clue types?

- b. What texts will you use to have students do guided practice in finding and using the different context-clue types?

- c. How will you formatively assess student use of the different types of context clues?

- d. If you teach on a team, how will you communicate and support your colleagues in providing supplementary teaching in the different context clues?

3. If you chose Greek and Latin roots, you have ideas to consider, too:
- Which type of implementation will you use? A prepackaged program, team approach, or individual content area approach with a common word study routine? Why did you choose that route?

- How will you sequence words for maximum impact?

- Which word study strategy(s) will you use?

4. REFLECT: How did the implementation of word attack strategies go? Are students better able to use either morphology or context clues to figure out unknown words?

Common Greek and Latin Roots

Elementary-Level Latin and Greek Roots and Affixes	
Prefixes	Definition
a-, ab-, abs-	away, from
ad-	to, toward, add to
co-, com-, con-, col-	with, together
de-	own, off of
di-, dif-, dis-	apart, in different directions, not

Elementary-Level Latin and Greek Roots and Affixes	
Prefixes	Definition
ex-	out
in-, im-, il-	in, on, into (<i>directional</i>)
in-, im-, il-	not (<i>negative</i>)
pre-	before
pro-	forward, ahead
re-	back, again
sub-	under, below
tra-, tran-, trans	across, change
un-	not (<i>negative</i>)

Parallel Latin and Greek Prefixes		Definition
Latin	Greek	
contra-, contro-, counter-	anti-	against
circu-, circum-	peri-	around
multi-	poly-	many
super-, sur-	hyper-	over
sub-	hypo-	under, below

Bases	Definition
audi-, audit-	hear, listen
cred-, credit-	believe
cur-, curs-, cours-	run, go
dict-	say, tell, speak
duc-, duct-	lead
fac-, fic-, fact-, fect-	do, make

Bases	Definition
graph-, gram-	write, draw
mis-, mit-	send
mov-, mot-, mobil-	move
pon-, pos-, posit-	put, place
port-	carry
scrib-	script, write
terr-	earth
vid-, vis-	see

Numerical Bases (Appear at Beginning of Words)	Definition
uni-	one
bi-	two
tri-	three

Parallel Latin and Greek Bases		Definition
Latin	Greek	
aqua-	hydro-	water
ped-	pod-	foot, feet
terr-	geo-	earth

Source: Rasinski et al. (2010)

Root Word Tree Template

