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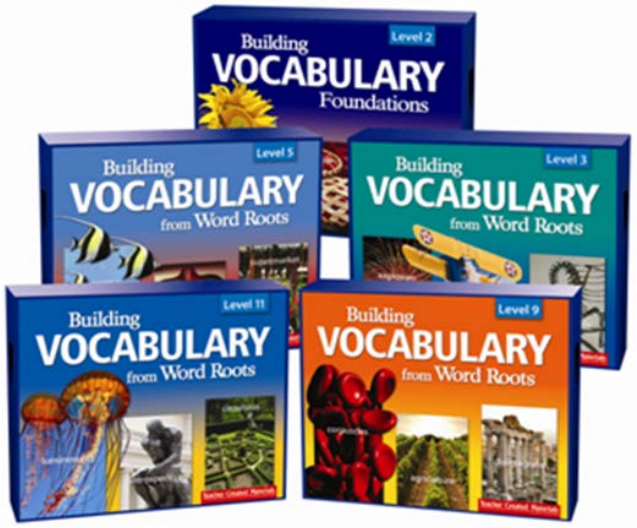
PUBLISHING

Building Vocabulary through Greek and Latin Roots Webinar



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THIS WAY
TO
OUR
GREEK AND
LATIN ROOTS!
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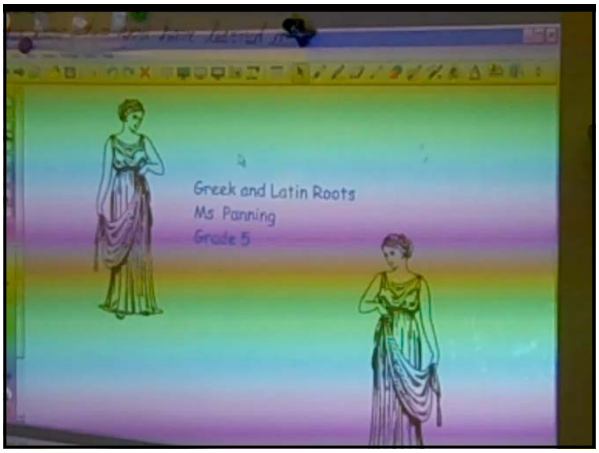
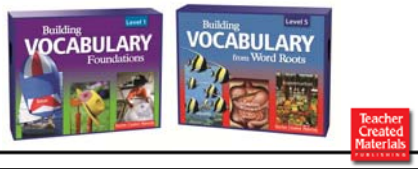

Greek and Latin Roots
Ms. Panning
Grade 5

Our Program

--Why Roots?
--How Do Roots Work?
--Using the *Building Vocabulary* approach



Did You Know?

English has the largest lexicon in the world –over 1,000,000 words!

(Rasinski, Padak, Newton & Newton, 2008)

Did You Know?

Each year over 12,000 new words are added to the English language!

(Rasinski, Padak, Newton & Newton, 2008)

Did You Know?

The average 5th grader will meet 10,000 new words in reading.

(Nagy & Anderson, 1984)

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Research has found that students can learn only 8-10 words per week through direct instruction.

(Stahl & Fairbanks, 1986)

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VOCABULARY LIST

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Why not?

Words **have multiple meanings** (polysemy)

Words' meanings are **dependent on context** (heterogeneity)

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How many MEANINGS can you think of for the word "run"?

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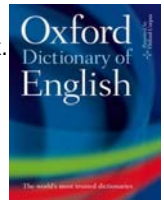
Here are just a few…

- Every morning I *run* 5 miles before work.
- I had to *run* to the store to get milk.
- A river *runs* through the center of town.
- The theme *runs* through the book.
- A politician *runs* for office.
- The car *runs* on gas.



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Have you ever considered that…

- *Noses run* but *feet smell*.
- We fill *in* a form by filling it *out.*
- A *slim chance* and a *fat chance* mean the same thing, but a *wise man* and a *wise guy* are opposites.
- We *recite* at a *play* but *play* at a *recital.*

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Why Study Latin and Greek Roots?

- 90% of English words with more than one syllable are Latin-based……
- ….and most of the remaining 10% are Greek-based!
- Many of the content words in textbooks will be of Greek and Latin roots!

(Rasinski, Padak, Newton & Newton, 2008)

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Roots are generative!

1 WORD

word
word
word

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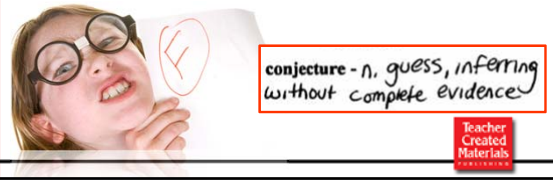
Remember Mike's vocabulary list?

One of his words was "conjecture"

What if Mike's teacher had chosen to focus on *ject* instead?



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"Ject" means "throw"

Here are just a few *ject* words!

object, project, abject, eject, subject, adjective, reject, projector, inject, interject, dejected, conjecture, trajectory, projectile, jettison, injection, objective, subjective…

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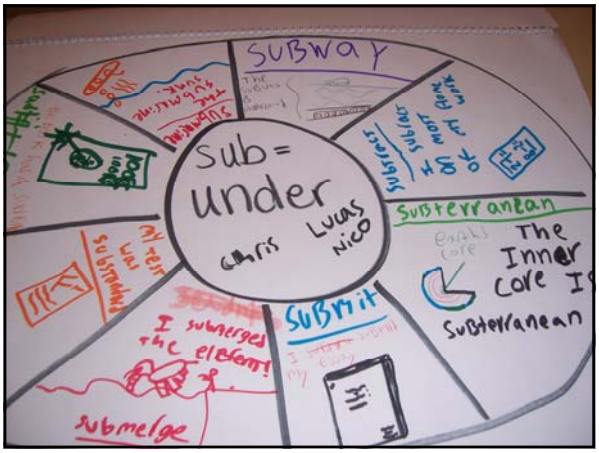
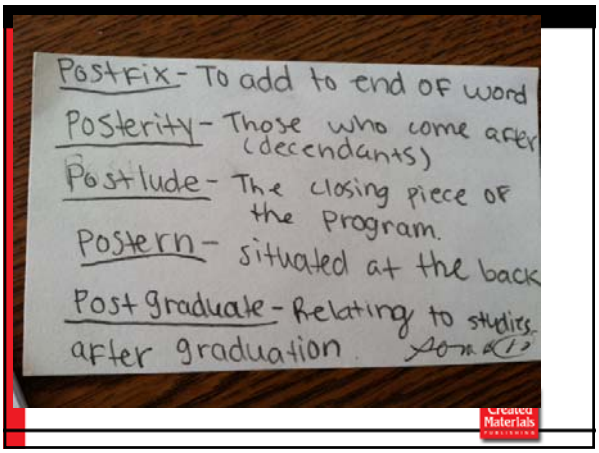




MATH	SCIENCE	SOCIAL STUDIES
tangent	neonatal	Congress
secant	hematologist	segregation
diameter	pandemic	democracy
circumference	hydrophobia	polytheism
centigrade	vertigo	philanthropy
parallel	synchronize	secession
infinite	anemia	conservative
kilogram	excision	controversial
subtract	specimen	rebellion
quadrangle	transfusion	mobility
polygon	dissection	consensus
aggregate	extraction	native
quarter	neonatal	pacifism

Building Vocabulary from Word Roots, Level 8)

A computer "cursor" and a race "course" both come from the Latin verb "to run."

About 75% of Spanish words are derived from Latin.

What Is a "Root"?

Root is a part of a word that carries meaning.

"Root" is an "umbrella" term for the three categories of word parts.

PREFIX: A root placed at the beginning of a word.

BASE: A root that gives a word its "core" meaning.

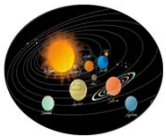
SUFFIX: A root placed at the end of a word.

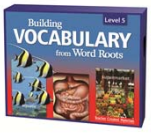
Revolution

is built from 3 Latin roots!

Re + vol/volv/volut + ion

Prefix = back/again **base** = turn **suffix** = **noun** **("act of")**





Your Turn…

What words do you know that begin with

MOV, MOT, MOBIL

which means

"***move***"?

Make a list on a piece of paper.

Here are just a few…

1. MOVE
2. MOVEABLE
3. MOTOR
4. MOTION
5. MOTIVATE
6. MOBILE

Now add some prefixes…

con - commotion

re - remove

mov, mot, mobil "move"

de - demote

pro - promote

e - emotion

in – immobile

Emoticon

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Now add some prefixes…

commotion

remove

mov,
mot,
mobil
"move"

demote

promote

emotion

immobile

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Did you think of these academic words?

REMOTE LOCATION
SALES PROMOTION
TOO MUCH COMMOTION
EMOTIONS: "I WAS SO MOVED!"

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Or this specialized content area vocabulary?

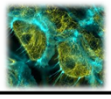
"MOVEMENTS" OF A SYMPHONY

"MOTIF" IN ART AND NOVELS

MAKE A "MOTION" IN A MEETING

UPWARDLY MOBILE

MOTILITY OF A CELL



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Where is the "move" in these neologisms?

MOTEL (motor hotel)

MOTION PICTURES ("movies")

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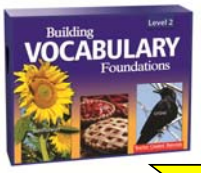
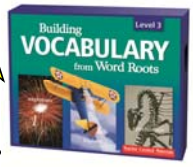


CollegeBoard

mov,
mot,
mobil
"move"



What Does the Research Say?

Key word roots build conceptual knowledge that allows students to make **semantic connections** between words.

The study of morphology (roots) help students ***understand how words work.***

COMMON CORE STATE STANDARDS

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What Does the Research Say?

A study of 111 fourth/fifth grade students in an urban California school district found that…

"Students with greater understanding of morphology also have higher reading comprehension scores…"

Kieffer, M.J. & Lesaux, N. K. (2007). "Breaking down words to build meaning: Morphology, vocabulary and reading comprehension in the urban classroom. *The Reading Teacher 61(2)*, pp. 134-144.

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What Does the Research Say?

And in fifth grade…

"…students' <u>understanding of morphology was a better predictor of reading comprehension than their vocabulary level</u>…This relationship was the same for Spanish-speaking ELLs as for native English speakers in an urban setting"

(pg. 138)

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What Does the "Common Core" Recommend?

- Identify common root words (gr 1)
- Introduce common prefixes and compound words (gr 2+)
- Identify and know meaning of common prefixes and suffixes (gr 3+)
- Know and use common Greek and Latin roots [bases] (gr 4+)

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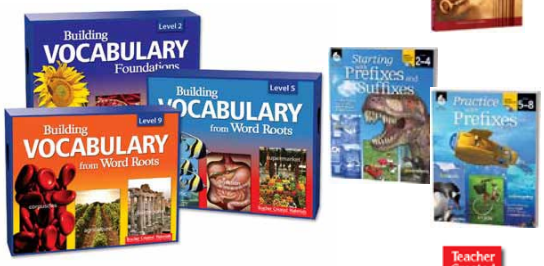
Building Vocabulary Levels 1-11
A Research-Based Approach



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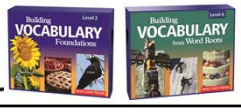
Why **these** roots for *Building Vocabulary*?

These are the roots students need to know by and through high school**.**

- Selected 25 anchor roots for each school year. Began with roots in words children already know.
- Focused on roots rich in **cognates** to increase **word awareness**.

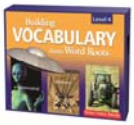


How does the *Building Vocabulary* approach work?

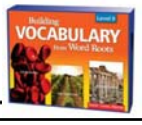
A systematic approach to word awareness and vocabulary building for students in Grades 1–11

Levels 1 -2 : Foundations
Teach word analysis at the word family level
Supporting Learning to Read

Levels 3-8 : Word Roots
Teach Greek & Latin prefixes, bases, and suffixes
CCSS 4.L.4 – 8.L.4
Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word



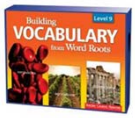
Levels 9-11: Word Roots
Build on the roots taught in previous levels with greater depth and complexity
Effectively prepare students for SAT and ACT



3 Guidelines for Instruction

Establish predictable routines.
– 10-15 minutes per day for vocabulary

Teach directly and indirectly.
- Show, tell, scaffold, explain



Gradually release responsibility.
- Move from teacher-led discussion to activities that scaffold independent learning.

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The Instructional Routine:

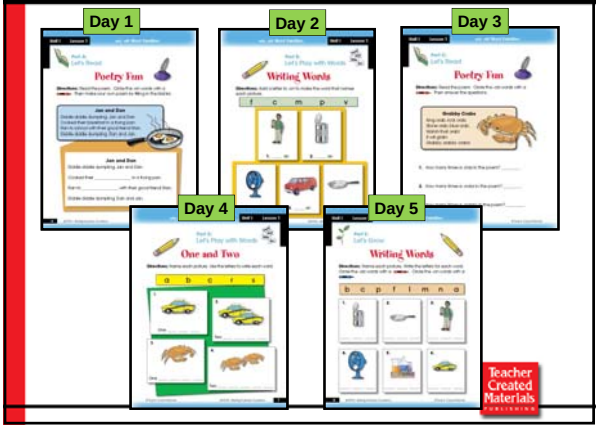
Levels 1-2

Day 1: Let's Read *(Demonstration and Guided Practice)*
Teacher uses Shared Reading of poem to introduce word family.

Day 2: Let's Play with Words *(Guided Practice)*
Students reread the poem and complete practice activities.

Days 3-4: Repeat cycle with a new word family.

Day 5: Let's Grow Students complete activities using both word families.



The Instructional Routine:

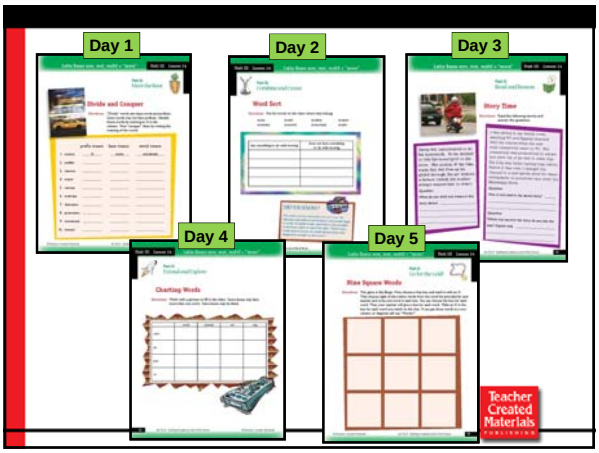
Levels 3+

Day 1:Meet the Root *(Demonstration)*
Teacher introduces root; helps students divide and conquer.

Day 2: Combine and Create *(Guided Practice)*
Students build words with root.

Day 3: Read and Reason *(Independent Practice)*
Students will encounter and read roots in short narrative and informational passages.

Days 4-5: Extend and Explore/Go for the Gold
Students play with root words in quick, easy and enjoyable activities!



Word Dissection:
Divide and Conquer

Word dissection (*Divide and Conquer*) helps students identify semantic units and build a connection that unlocks a word's meaning.

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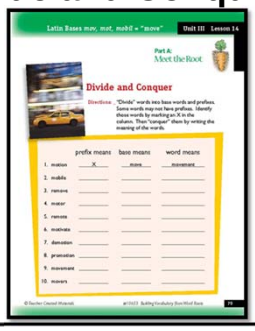
Students Learn to Divide and Conquer…



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The Instructional Routine:

Differentiation

- Students need many opportunities to build independence by using and *exploring words in different oral and print contexts*.
- Word play using the root in variety of contexts

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Word Composition:
Combine and Create

Word composition to manipulate root parts and generate new vocabulary.

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Read and Reason

Authentic reading and writing activities that contextualize vocabulary.

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Extend and Explore

Individual and collaborative activities that use words in creative ways, including word games.

Opportunities to explore word histories through print and electronic resources.

Go for the Gold!

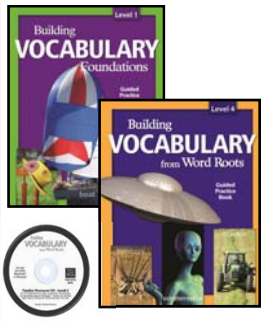
- Word games that review the words and concepts for the week.
- Opportunity to assess student learning.

Vocabulary instruction must foster an awareness of and interest in words.

- *Just five minutes of word play each day can build a child's vocabulary and improve reading comprehension.*

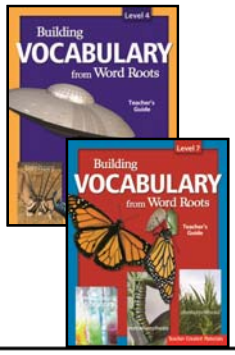
As they work with roots, students think actively about words. They explore word histories. They enjoy playing "word games" on their own or with classmates.

What About Assessment?



- Select any activities from days 2-5 to use for assessing student progress
- Bonus pages on CD

What About Assessment?



Assessment Section of Teachers' Guide

- Diagnostic Pre and Post Tests (beginning and end of year measurement of student progress)
- Unit Quizzes for each unit

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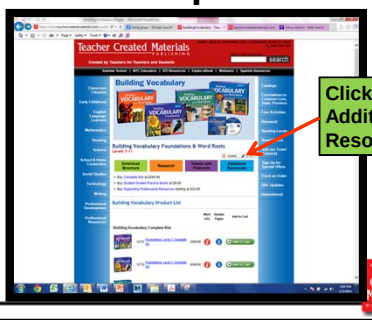

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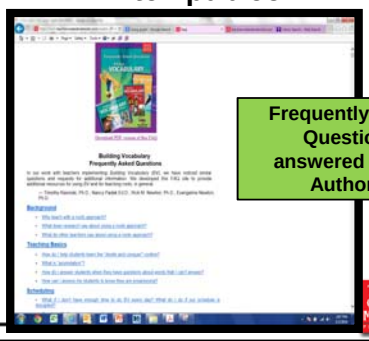

Students who learn Latin and Greek roots can…

VENI, "DIVIDI," VICI vocabulary…

acropolis

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THE LATIN–GREEK CONNECTION

Building Vocabulary Through Morphological Study

Timothy V. Rasinski ■ Nancy Padak ■ Joanna Newton ■ Evangeline Newton

Using Latin and Greek word roots to teach multiple words is a more efficient approach than the traditional vocabulary instruction of teaching words as single entities.

It goes without question that vocabulary, a reader's knowledge of the meaning of words and concepts, is central to success in reading (National Institute of Child Health and Human Development [NICHD], 2000). Studies and reviews of research over the past three decades have shown that the size and depth of elementary students' vocabulary is associated with proficiency in reading comprehension and that instruction to increase readers' vocabulary results in higher levels of reading comprehension (e.g., Baumann et al., 2002; Beck, Perfetti, & McKeown, 1982; Kame'enui, Carnine, & Freschi, 1982; Stahl & Fairbanks, 1986).

Yet despite the promise of vocabulary instruction to improve elementary students' reading, consensus about instructional approaches is lacking. Although Stahl and Fairbanks (1986) suggested that "some methods of vocabulary instruction may be more effective than others" (p. 73), the NICHD (2000) noted that "While much is known about the importance of vocabulary to success in reading, there is little research on best methods" (p. 17).

Moreover, the reality of the classroom is that teachers are generally not familiar and not comfortable with anything more than dictionary definitions and the use of sentence context to teach vocabulary (Berne & Blachowicz, 2009; Blachowicz, 1987; Bloodgood & Pacifici, 2004). On the basis of their findings, Bloodgood and Pacifici suggest that teachers need to be introduced to new approaches to word study to build their "knowledge base and implementation strategies" (p. 253). This article attempts to address this situation by making the case for a very productive, efficient, and engaging approach to vocabulary and the study of words.

Focus on Meaningful Word Patterns

For young children, the development of morphological awareness is an integral component of word learning. Biemiller and Slonim (2001) determined that children acquire about 600 root word meanings per year from infancy to the end of elementary school. In a comprehensive review of 16 studies analyzing the effect of instruction in morphological awareness on literacy achievement, Carlisle (2010) observed that "Children learn morphemes as they learn language" (p. 465). Building on this observation, the playful

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exploration of meaningful word parts appears to be developmentally appropriate for elementary students.

Although not traditionally associated with the elementary grades, an effective approach to vocabulary instruction is a morphological approach—more specifically, an approach that taps into the fact that a significant number of words, particularly academic words, in English are derived from Latin and Greek. Why Latin and Greek? Modern English vocabulary (as well as Spanish, French, Italian, and the other Romance languages) is thoroughly grounded in Latin and Greek. To grasp the importance and impact of Latin and Greek in English, consider the following facts (Rasinski, Padak, Newton, & Newton, 2008):

- Most of the academic words in English (e.g., math and science words) are derived from Latin and Greek.
- Most of the more challenging multisyllabic words in English are derived from Latin and Greek.
- A single Latin or Greek root or affix (word pattern) can be found in and aid in the understanding (as well as decoding and encoding) of 20 or more English words.
- Because Spanish is also a Latin-based language, Latin (and Greek) can be used as a bridge to help Spanish-speaking students use knowledge of their native language to learn English.

Pause and Ponder

- Do you feel that students in the elementary grades are developmentally ready to study meaningful roots from Latin and Greek as part of their vocabulary instruction? Why or why not?
- Have you attempted in the past to draw your students' attention to the meaningful patterns embedded in words? How have they responded?
- How do you think your students would respond to the activities described in this article?
- Look over the list of roots and affixes in Table. Given the grade level at which you teach, what roots and affixes do you think would be most appropriate to present to your students?

Clearly, the study of Latin and Greek linguistic patterns offers an approach to take vocabulary to a deeper and more expansive level. Students of Latin in high school or college often recognize how the English lexicon has been influenced by Latin. Knowledge of Latin and Greek roots increases our ability to understand English words. Knowing that *trac*, *tract* mean to pull, draw, or drag can help students understand words such as *track*, *tractor*, *traction*, *retract*, *detract*, *abstract*, *contract*, *contraction*, *extract*, *intractable*, *protractor*, *subtract*, *trace*, *retrace*, and many more.

However, the exploration of Latin and Greek need not be limited to the secondary grades, as it has been in the past. We feel that students in the elementary grades can benefit from guided awareness of and instruction in Latin and Greek roots. In fact, research has demonstrated that many roots and affixes, including those of Latin and Greek origin, can readily be learned in the primary grades (Biemiller, 2005; Mountain, 2005; Porter-Collier, 2010).

Other studies have demonstrated the promise of teaching Latin and Greek roots in the intermediate grades (Baumann et al., 2002; Carlisle, 2000; Kieffer & Lesaux, 2007). In their studies, Baumann and colleagues noted that students were able to use their knowledge of "morphemic elements.... to infer meanings of untaught words" (p. 170), and Carlisle concluded that

> the morphology measures together contributed to reading comprehension. The relationships were particularly strong for the fifth graders but it is noteworthy that they were significant for third graders who are presumably still learning basic strategies for recognizing polysyllabic words in print. (p. 183)

Kieffer and Lesaux (2007) concluded, "Students' understanding of morphology was a better predictor of reading comprehension than their vocabulary level" (p. 138). They also found that morphology was as important for English learners [ELs] in contributing to comprehension as it was for native English speakers.

A Latin- and Greek-based approach to vocabulary instruction appears to be a useful way to provide instruction that meets diverse students' needs. ELs, for example, have been identified as the largest growing population in U.S. schools (Flynn & Hill, 2005). Because so many of these children speak first languages semantically embedded in the Latin lexicon (e.g., Spanish), enhancing this linguistic connection can accelerate students' vocabulary growth (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006). Similarly, research in content area vocabulary has demonstrated the effectiveness of teaching Greek and Latin word roots, especially for struggling readers (Harmon, Hedrick, & Wood, 2005).

Moreover, as students move through the grade levels, they face an "increased load of new words, new concepts, and multiple meanings" in school texts of increasing difficulty (Blachowicz & Fisher, 2000, p. 511). Nagy and Anderson (1984) estimated that in grade 5,

students meet 10,000 new words in their reading alone and that school texts used in grades 3–9 contain approximately 88,500 distinct word families. A majority of the new words encountered in these texts are of Greek and Latin origin. A teacher in the Mountain (2005) study summed up the potential of a Latin–Greek approach to vocabulary with the following quote: "Morphemic analysis may be one way to narrow the gap between the vocabulary 'haves' and the 'have nots'" (p. 744).

Recently, Blachowicz et al. (2006) called for a "comprehensive, integrated, schoolwide" approach to vocabulary instruction. They proposed that vocabulary become a "core consideration" across grade levels and subjects and that it be based on a "common philosophy and shared practices" (p. 527). Salient components of such a program focus on fostering "word consciousness," the "intentional teaching of selected words," and teaching "generative elements of words and word-learning strategies to build independence" (p. 527). Blachowicz and colleagues (2006) also emphasized the critical need for students to make "semantic connections among words," connections that are apparent to students and that they can verbalize. They further noted that research that focuses on teaching structural analysis or morphology has found this approach to be helpful for learning new words.

Based on this research, we feel that a Latin–Greek emphasis should be an integral part of the core elementary vocabulary program. The intentional selection and instruction of Latin–Greek roots and affixes can provide students with opportunities to maximize their word learning, and the semantic nature of Latin–Greek roots provides a natural connection between English words that we expect students to learn. Blachowicz, Fisher, and Watts-Taffe (2011) noted that research has demonstrated that the teaching of individual words (including morphemes) can be part of effective vocabulary instruction.

"The next quantum leap in vocabulary growth…will come when the systematic study of Latin–Greek derivations is embedded into vocabulary programs for the elementary…grades."

The next quantum leap in vocabulary growth, we believe, will come when the systematic study of Latin–Greek derivations is embedded into vocabulary programs for the elementary, middle, and secondary grades. Given the Latin–Greek imperative, in the next sections we offer suggestions for working with elementary students, explore productive derivations that should be taught at the elementary level, and provide some instructional methods for teaching those derivations.

What Roots to Teach?

There has never been a scientifically based identification of rimes appropriate for teaching students at various grade levels or an identification of the order in which the rimes should be taught. Teachers and curriculum developers rely on professional knowledge to make those determinations. Similarly, there exists no scientifically based identification of Latin–Greek word roots worth teaching or order of presentation. Until such an identification is made, expert opinion must be relied upon.

The Table presents what we believe, based on our own expertise and experience, are the most useful and appropriate roots worth teaching in the elementary grades (Padak, Newton, Rasinski, & Newton, 2008). We developed these lists from reviews of language arts and content area materials; identification of roots that appear most frequently in English; and identification of roots that have the greatest use for primary, intermediate, and middle grades.

The roots have also been validated by a group of practicing teachers who have used them instructionally with their students. These lists of roots are meant neither to be mandatory nor exhaustive. We provide them simply as a starting point for discussing and developing an English vocabulary curriculum based on Latin–Greek word roots. Rasinski, Padak, Newton, and Newton (2007) provide a more detailed and comprehensive listing of roots by grade level.

Helping Elementary Students Learn About Roots

All primary-level reading instruction includes attention to phonics or word decoding. Students learn to "look inside" of words for familiar letters, word families, and other letter patterns. Teachers can use this foundation as a platform to help students in grades 1 and 2 learn about word roots—prefixes, suffixes, and base words. That is, teachers can help students learn to look inside of words for familiar meanings in addition to familiar sounds.

Attention to compound words offers an easy way to help students make

Table 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
ex-		out
in-, im-, il-		in, on, into (*directional*)
in-, im-, il-		not (*negative*)
pre-		before
pro-		forward, ahead
re-		back, again
sub-		under, below
tra-, tran-, trans-		across, change
un-		not (*negative*)
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
graph-, gram-		write, draw
mis-, mit-		to 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
Suffixes		**Definition**
-able, ible		can, able to be done
-arium, -orium		place for, container for
-er		more
-est		most
-ful		full of
-ify		to make
-less		without
-or, -er		one who does
-ose, -ous-, -eous, -ious		full of

Note. Order of roots is not sequential.

the sound-to-meaning shift. Teachers should start with familiar, two-syllable compound words such as *bedroom*, *birthday*, or *football*. Students can learn to look for two words within each compound word (Newton, Padak, & Rasinski, 2007). The teacher can underscore that the two words in each compound contribute to meaning, with the base meaning ordinarily found in the second word: What do we call a *room* where a *bed* is? What do we call a *ball* that you can kick with your *foot*? After students develop facility with familiar two-word compounds, the teacher can introduce three-syllable compound words, such as *storybook* or *fingernail*, and invite students to look for meaning within these longer words.

Common prefixes, such as *un-*, can provide the next step in helping students move from sound to meaning. Again, teachers want to select words that are familiar—*unwrap*, *unhappy*, *unzip*, or *unbend*—and eventually shift to more challenging words, such as *unchanged*, *unanswered*, and *unprepared*. Questions such as these can help students look for letter combinations that, although not words by themselves, still carry meaning: "If *un-* means *not*, what does *unhappy* mean?" "If *un-* means *not*, what does *unchanged* mean?" Easy suffixes (e.g., *-er*, *-est* [more, most/very]; *-ful*, *-less* [full of, without]) can be introduced next, in a similar manner.

These procedures build awareness that units within words can contain meaning as well as sound, an awareness that allows students to add a "semantic unit" approach to their vocabulary repertoires. They learn how to "get inside" words and look for units that carry meaning. They learn to look for roots and to think about how the different parts of a word (beginning, middle, end—or prefix, base, suffix) all work together to generate meaning.

Teaching Latin and Greek Word Roots

Given the limited amount of time available for vocabulary instruction, teachers might focus on one to two roots per week through 10 minute sessions three to five times per week (less than one hour per week total). Those one or two roots per week, however, may yield understanding of 40 or more English words. In the following section, we present a sampling of four rather simple instructional approaches for exploring Latin–Greek roots. The first activity is a superb way to introduce a root, the second is an excellent reinforcement activity, and the third and fourth are creative extension activities. A more comprehensive and detailed presentation of instructional methods can be found in *Greek and Latin Roots: Keys to Building Vocabulary* (Rasinski et al., 2008).

Divide and Conquer (Grades 1–5)

Divide and Conquer is an instructional approach for helping students recognize the structure, sound, and meaning of prefixes, bases, and suffixes. It is an excellent activity for introducing students to particular roots and then guiding them in exploring the essential meaning of the roots.

Start with a list of approximately 10 words that have the same prefix (e.g., for the prefix *re-*: *replay, rewind, reboot, recycle, redo, review, remind, recall, restate, resell*). Read the words orally with the students. Have students choose one or two words from the list, identify the two basic units to each word, and speculate about what each means. As students offer explanations, reinforce the critical meaning of the prefix. Help students understand that meaning of the full word is obtained through the relationship of the base word with the prefix.

On a display board or chart, as well as on individual student sheets, have students list each complete word, divide each into component parts (prefix and root), and then provide a personal definition for each word. An example follows:

> Replay, re + play, to play again
>
> Reboot, re + boot, to start a computer again
>
> Review, re + view, to look at once more

Word Spokes and Word Charts (Grades 1–5)

Word Spokes is a superb way to reinforce the root(s) or affixes introduced in Divide and Conquer for students. The activity requires a visual display (both for the classroom and for individual students) that is a center circle with spokes or rays coming from the center circle (much like sun rays or spokes coming from the hub of a bicycle wheel).

Begin the lesson by reviewing the roots or affixes that are the topic for the week, focusing on their essential meaning. Remind students, for example, that *re-* used as a prefix means "again" or "back." Then, working alone, in small groups, or as a whole class, have students brainstorm words that contain the *re-* prefix and list them at the end of the spokes on the word spoke chart or paper. In addition to words used in the Divide and Conquer lesson, encourage students to think (or search) for other words, such as *revisit*, *reenergize*, or *relocate*. Once the Word Spokes chart is developed (see Figures 1 and 2), guide students in a discussion of the meanings of the words.

Figure 1 Word Spoke Chart for Ex=Out

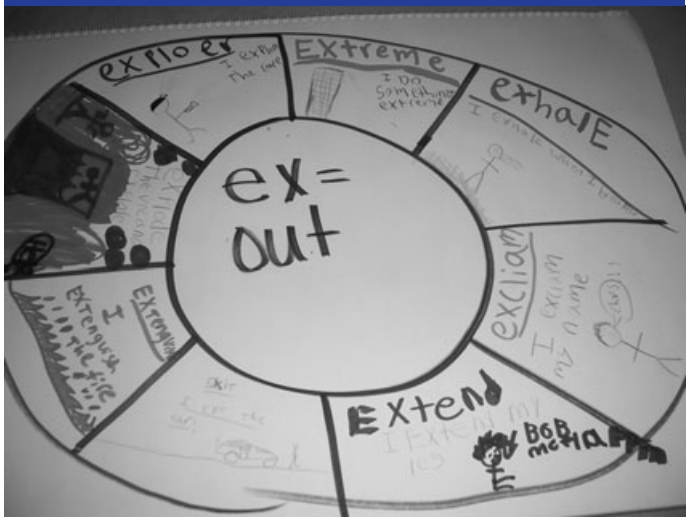

Figure 2 Word Spoke Chart for Sub=Under

"A growing body of academic research is beginning to demonstrate the power and potential of a Latin–Greek approach to vocabulary instruction."

You can think of the classroom Word Spokes chart as a specialized word wall. Throughout the week, make frequent references to the words on the chart, encourage students to add new words they may find to the chart, and encourage students to use the words in their own written and oral language.

You can also create simple word charts organized around particular roots and affixes. At the top of the chart print the root or affix to be featured. Beneath it, ask students to brainstorm and then list all the words that are associated with that root or affix. For example, on Earth Day you might want to do a word chart about *terr-* (*earth* or *land*), with students brainstorming words such as *terrain*, *terrace*, *terrarium*, *Mediterranean*, *extraterrestrial*, *subterranean*, *terrier*, or *Terre Haute*. Then throughout the week, you can make pointed references to the words and encourage your students to do the same in their oral and written language.

Be the Bard (Grades 3–5)

Although most people recognize William Shakespeare as a great writer of plays and poetry, few people realize that he was one of the great wordsmiths of history. It has been estimated that Shakespeare invented approximately 8% or 1 of every 12 unique words that he used. Many of the words that he invented were simply compounds made of already existing base words, affixes, or both. Words such as *skim milk*, *lackluster*, *premeditated*, and *noiseless* are but a few examples of the words created by William Shakespeare.

When it comes to exploring and learning about the English language, Shakespeare is a pretty good fellow to emulate. And if Shakespeare could create new words by combining existing roots and affixes, so can students. We call this *Be the Bard*, and it is a great way to give students permission to be active and creative in exploring words by using already learned roots and affixes. To *Be the Bard*, students simply take already learned roots and affixes and combine or attach them to existing words to create new words. Student-invented words are put on display, and the inventor is asked to explain the meaning of his or her creation. Here are some words students invented: *automand* (an order than one gives to himself or herself), *terrameter* (a device for measuring land), and *contraduct* (to lead a group against another group).

Although these created words are fanciful, students take genuine delight in using meaningful roots and affixes to create even more meaning. Moreover, when students are actively engaged in making meaning in this way, they are much more likely to grasp and hold the essential meanings of the roots than when they learn in the more traditional manner of passive memorization.

Passage Reading (Grades 3–5)

Words are often learned through contextual reading in which the context surrounding a target word provides an explanation, clarification, or exemplars of and for the target word. We have found that it is not difficult for teachers to develop short passages or poems containing a targeted word root with explanatory context that provides students with opportunities to solidify their understanding of the root as well as improve their overall reading fluency. Here's a poem we wrote for the *port* root:

> Port-o-Poem
>
> Transport Export Import Too
> *Port* means to move things
> Like from me to you!
> A porter carries your luggage
> A reporter carries the news
> Something portable can be moved around
> Do you know how an airport might be used?

Although not the most poetic piece ever written, like all fun poetry, students want to read this repeatedly. The repeated reading of the verse develops reading fluency; it also helps students cement in their minds the connection between the *port-* root, its essential meaning, and English words derived from it.

Teacher Perceptions and Student Achievement

As we noted earlier, a growing body of academic research is beginning to demonstrate the power and potential of a Latin–Greek approach to vocabulary instruction. But just how do teachers feel about such an approach

"(Teachers) saw the value and potential of implementing a roots approach in their elementary classrooms."

after a year of implementation? What good is it to have a powerful instructional program if teachers do not believe it will work? Third-grade teacher Joanna Newton (2010) provided some insight into this concern through surveys of 10 elementary teachers who had spent the previous year implementing a Latin–Greek approach to vocabulary instruction and had been given regular professional development, instructional modeling, and ongoing support for their efforts.

The teachers unanimously believed that focusing on Latin and Greek roots affected their word study instruction. Teachers noted that the study of Latin and Greek altered their own personal attitudes toward word study and approach to learning words. They saw the value and potential of implementing a roots approach in their elementary classrooms.

One teacher commented, "Right from our very first meeting, I was shocked and amazed at how much more words made sense just by using a few prefixes" (p. 14). Another noted, "although I have always been an avid reader and feel that I have a strong vocabulary, I have never thought about what specific word parts mean. So I learned how to divide and conquer words just as my students did" (p. 15). A third teacher indicated, "I now look more in-depth at words. I find it interesting and have a better understanding of how to teach words" (p. 15).

Did the focus on word roots make a difference with students? Over half the teachers indicated that their students' general reading comprehension and their understanding of content related reading material improved as a direct result of their instructional focus on word roots.

Third-grade teacher Iisha M. Porter-Collier (2010) implemented a 10-week vocabulary unit of study that focused on students learning Latin–Greek roots and affixes in an urban school using the methods described previously. She found that the percentage of students meeting the school district standard for vocabulary improved from 19% to 47%. Students reported enjoying the instruction, particularly its game-like nature. They believed that learning certain word roots and affixes empowered them to learn many new words.

Although these studies are small in scale and done within the confines of actual elementary classrooms, they demonstrate, from both teachers' and students' perspectives, the potential that an informed and systematic approach to Latin and Greek word roots can have for improving students' vocabulary and literacy skills.

Final Thoughts

We recognize that the study of Latin and Greek roots is only one part of a complete vocabulary program. A strong vocabulary program also includes the study of novel words found in guided and independent reading, teacher read-alouds, and content area instruction. We also recognize that not all primary-grade students may be fully ready to study Latin and Greek roots. Still, we feel that the quick, engaging, and game-like nature of the activities we propose will help to develop an awareness of these important word patterns that will act as a foundation for future learning.

TAKE ACTION!

Divide and Conquer and Word Spokes can be taught over two days using the following steps:

Day 1

1. Create a list of English words that contain a particular Latin or Greek root or affix (e.g., *tricycle*, *triangle*, *triathlon*).

2. List the words on a display board or chart (as well as on students' individual sheets).

3. Guide students in dividing the target affix or root from the rest of the word and using the essential meaning of the root or affix to determine the meaning of the word. Draw students' attention to how the use of *tri* has changed the meaning of the words in very consistent ways.

- Tricycle, tri + cycle, a bike with three wheels
- Triangle, tri + angle, a shape with 3 angles (corners) and 3 sides
- Triathlon, tri + athlon, a contest made up of 3 separate events

4. Explore other words that contain the affix or root and attempt to determine how the affix or root has influenced the meaning of each word.

- triple, triplet, triceratops, triannual, trifocal, trifold

Day 2

5. On the following day of instruction, create a Word Spoke word wall by entering the affix *tri* and the number *3* on the center of a chart or display board. Circle the affix and number.

6. On spokes coming from the center circle, enter words containing *tri* as well as a brief definition or description of each word.

7. Put the Word Spoke word wall on display in the classroom. Encourage students (including yourself) to begin to purposefully use the words on the Word Spoke in their own oral and written language throughout the next several days.

We hope that your appetite has been whetted for making the study of Latin and Greek roots an integral part of your word study program. Whether you are a reading/English language arts teacher, a teacher of ELs, or a teacher who specializes in an academic area other than the English language arts, there is a place in your curriculum for the systematic study of Latin and Greek roots.

Think of the enormous advantage we can give students when they learn that one root can help them unlock the meaning to 5, 10, 20, or more English words! Moreover, it is likely that a fair number of those words are the academic words so essential to students' learning in the various content areas. The systematic, ongoing, and consistent integration of Latin and Greek roots into vocabulary instruction offers awesome potential for enhancing students' academic growth. As a field, we must work to make this happen so that we may also say, as Caesar once did upon returning to Rome after a great victory, "Veni, vidi, vici!"

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