

VOCABULARY UNPACKED

WHY IS VOCABULARY CENTRAL TO READING?

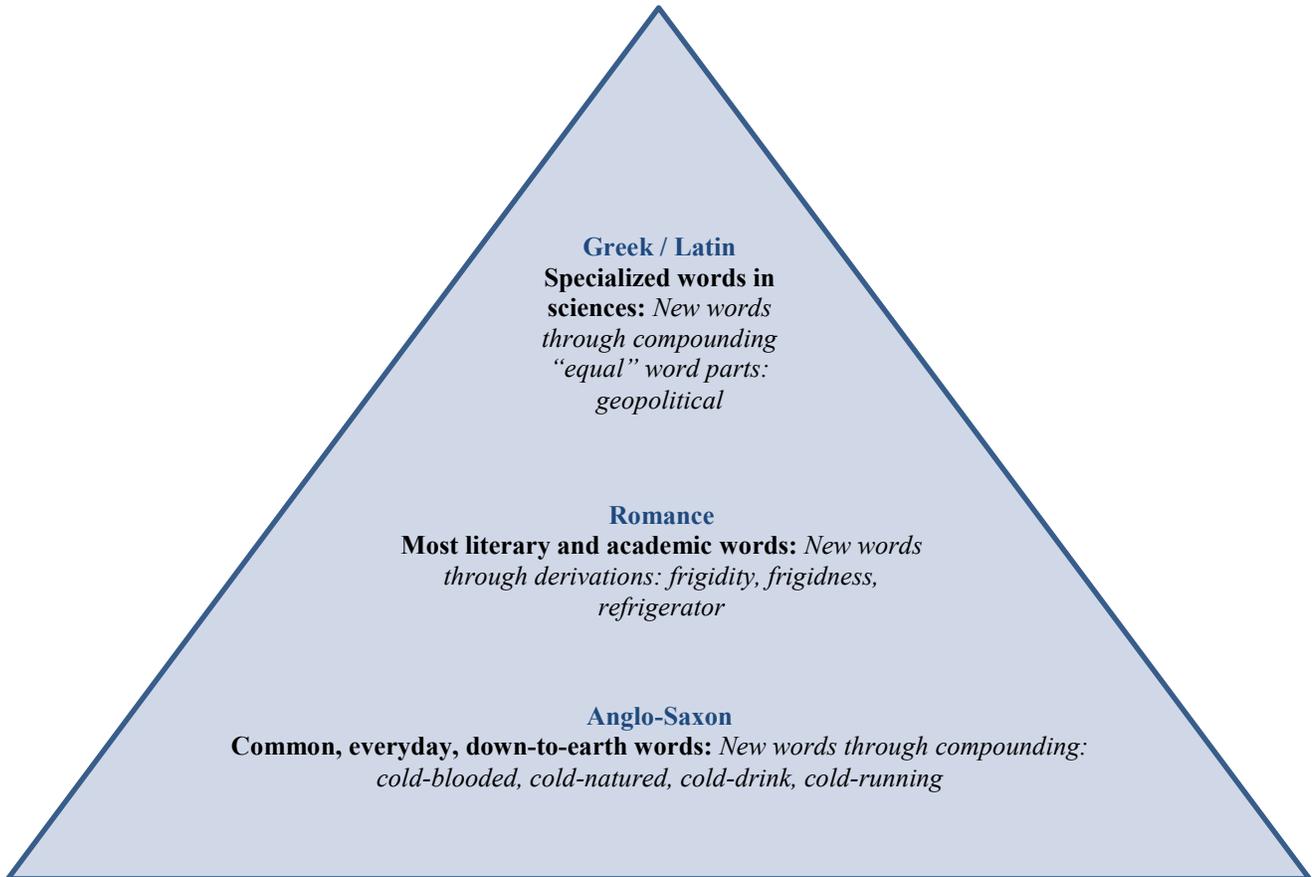
We label ideas with words: common ideas are labeled with words that children learn very early (e.g., *juice, ball*), while complex ideas are labeled with words that are rare (e.g., *photosynthesis, fusion*). We record our ideas in texts and, with only a few exceptions (e.g., a lecture in a college class), texts contain more sophisticated vocabulary than does oral language. To successfully comprehend texts, readers must have a deep and rich vocabulary. In fact, vocabulary is the strongest predictor of success in comprehending texts.

For students who are learning English, knowledge of English vocabulary looms large. What teachers need to remember is that English Language Learners (ELLs) have labels in their native language for many aspects of the physical and social world. These labels are deep and rich—they just aren't the English labels for the words. The labels might be Arabic, Bengali, Chinese, French, Haitian Creole, Korean, Russian, Spanish, or Urdu. As an illustration, see the chart below for English and Spanish and word relatives:

<i>English Common Word</i>	<i>Spanish Word</i>	<i>English Academic Word</i>	<i>English Academic Word: Morphological Family</i>	<i>Complex Phrases with English Academic Word</i>
tree	árbol	arboreal (of or relating to a tree)	arboretum, arboreally, arborescent, arborical, arborist, arborous	Arbor Day
moon	luna	lunar (of or relating to the moon)	lunation, lunarian, lunarium	lunar cycle lunar eclipse lunar tables
sun	sol	solar (of or relating to the Sun)	solarization, solary, solarium, solarism	solar system solar eclipse solar heating

WHAT ARE SOME CHALLENGES FOR ELLS IN ACQUIRING THE ENGLISH LABELS FOR IDEAS?

English encompasses such a massive vocabulary that all English words cannot possibly be taught in schools. What can be taught are critical words that exemplify principles commonly found in the English vocabulary. Teachers use these critical words to make underlying features and patterns of the English language visible to ELLs. Three aspects of English vocabulary that are important to uncover for ELLs are: morphology, core vocabulary, and the extended vocabulary networks of informational and narrative texts.



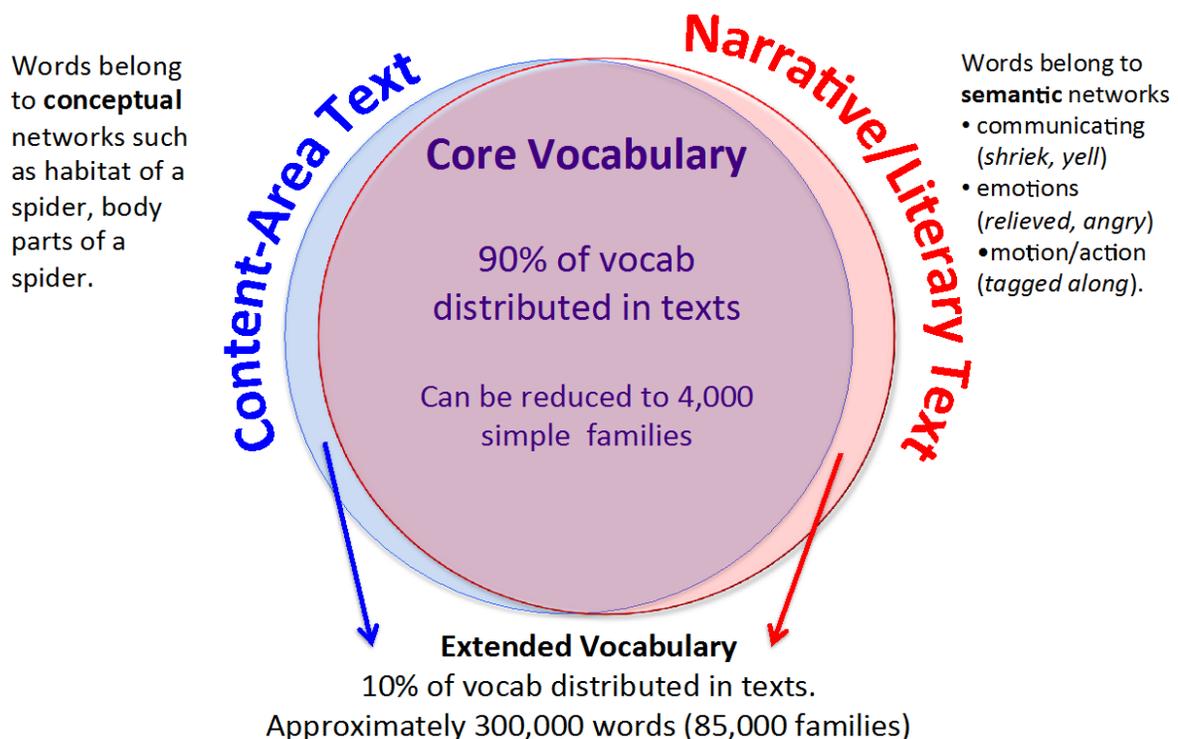
Part of the challenge in learning English words for ideas is that there are so many of them. Although English words are derived from many languages, the primary roots of English are in Anglo-Saxon, which is German-based, and in French, which is Romance-based. Additionally, English contains words with Greek and Latin origins, especially language relating to scientific and technical content areas. The vocabulary pyramid¹ illustrates the distribution of English vocabulary.

WHAT IS MORPHOLOGY?

Understanding the relationships between letters and sounds (phonics) is an essential component of recognizing words in English. However, there is much more involved in becoming a proficient English reader than learning phonics. To gain a strong English vocabulary, ELLs also need to understand how morphology works. Morphology refers to the meaning of words and word parts and the roles they play in language. The study of morphology typically includes analysis of morphemes, root words, prefixes and suffixes. Morphemes are the smallest meaning units of words. Morphemes that can stand on their own are called root words (e.g., *sun*). Other morphemes are referred to as bound, meaning that they need a root word to be meaningful (e.g., *s* in *suns*). As can be seen in the vocabulary pyramid, the ways in which new words are made in other languages can be very different than in English.

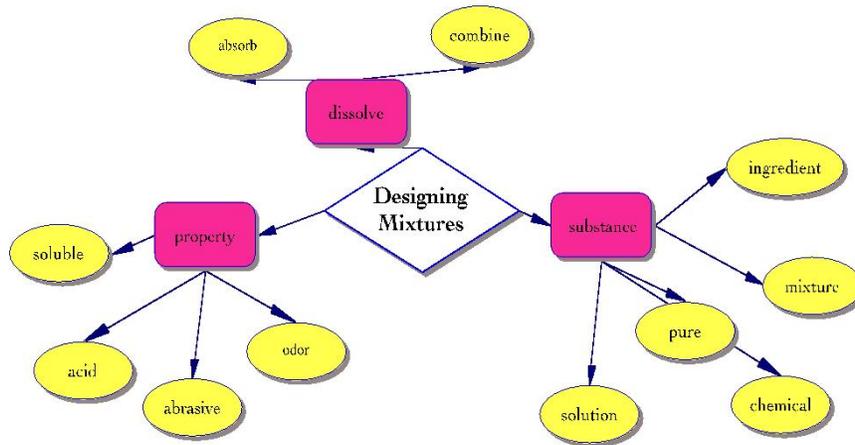
WHAT IS THE CORE VOCABULARY OF WRITTEN ENGLISH?

A very small group of words—approximately 4,000 simple families of words that share a morpheme (e.g., *help, helps, helped, helping, helper*)—account for 90% of all words in most English texts. These words are used so frequently because they take on multiple meanings and multiple parts of speech. Consider, for example, the word *set*. It can function as a verb (e.g., *set it down*), a noun (e.g., *a set of dishes*), or an adjective (e.g., *a set amount of money*). It is also used in numerous phrases (e.g., *set back, set off, set forth*) and in numerous idioms (e.g., *set in concrete, set sights on, set sail*). A seemingly simple word such as this can be challenging for ELLs as they work to understand subtle differences, such as the difference between *set off* and *set forth*.



Approximately 85,000 word familiesⁱⁱ account for the other 10% of the words in English texts. These extended vocabulary words are connected to one another morphologically (each of the 85,000 word families has an average of four to six members) and can also be connected semantically (i.e., by meaning). The semantic networks for the extended vocabulary are different for informational and narrative texts.

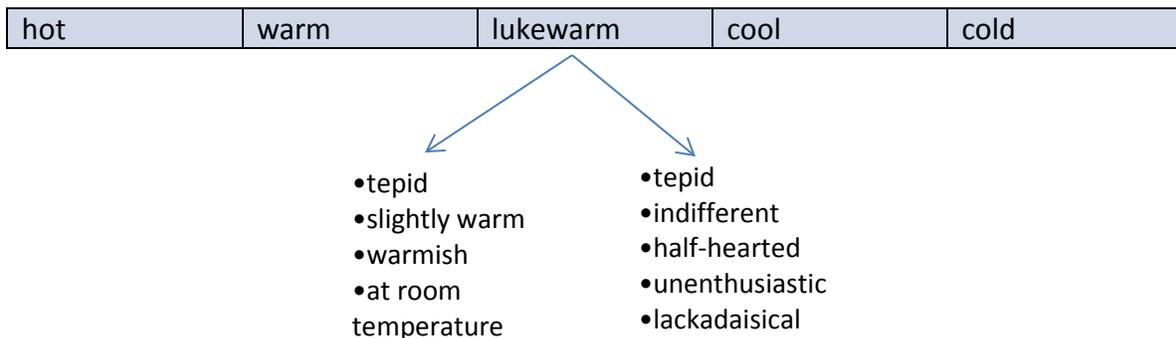
HOW DO THE UNIQUE WORDS OF INFORMATIONAL AND NARRATIVE TEXTS DIFFER?



In **informational** texts, rare words typically represent complex concepts that are new to students and require factual information or a related system of concepts to understand. Understanding *electrochemical energy*, for example, requires that students understand terms such as *chemical energy*, *conversion*, and *electric energy*. Often, students aren't familiar with the underlying concepts of these words. The critical words within the conceptual map for a chemistry unit illustrate the nature of networks in informational texts.

In **narrative** texts, rare words offer new ways of representing known concepts. ELLs are unlikely to recognize the meaning of *nonchalant*, but children and young adolescents know what it means to be *relaxed*, regardless of the label in their native language. Rare words serve consistent functions in narratives, such as describing characters' traits and emotional responses. ELLs need to learn that authors use a variety of rich and diverse words to describe these elements of stories, and that they may already know the concepts underlying this vocabulary.

The semantic network below illustrates how an unknown word is presented in relation to known concepts. In using such networks, ELLs learn an additional label for a known concept. At the same time, they learn how authors select words from a vocabulary palette.



KEY POINTS

- Words are labels for ideas. ELLs have words for many ideas in their native languages. This underlying knowledge needs to be connected to English words.
- Many English words are derived from Anglo-Saxon (Germanic) and French (Romance). In addition, scientific and technical words often come from Greek and Latin. These languages vary in how morphemes—the smallest unit of meaning in language—combine to form new words.
- Words that share the same root morpheme are called word families. Most words that students encounter in academic and literary texts beyond the primary grades are members of word families that have four to six members.
- A small group of words (approximately 4,000 simple word families)—called the core vocabulary—is used heavily in written English (they account for about 90% of words in most texts). Most of these words have multiple meanings and take on different parts of speech.
- The other 10% of the words in texts—the extended vocabulary—comes from approximately 85,000 word families. While rare, these words represent much of the content vocabulary of informational texts and the rich literary language of narrative texts.
- Words are clustered into semantic networks. The semantic networks of informational texts are clustered around words related to different aspects of a concept. The semantic networks of narrative texts are clustered by words that have similar but nuanced meanings.

TEACHING IMPLICATIONS

- Teach morphology as one of the word learning strategies. By applying a handful of guidelines, the 4,000 simple word families can be condensed even more—by about a third. Teach by exploring the guidelines around these word families:
 - compound words with the “head” (first) word (example: night—midnight, overnight, tonight)
 - words with the prefixes “a” and “un” with the root word (example: sleep—asleep; happy—unhappy)
 - words with the suffixes “-ment,” “-ion”, and “-ance” with the root word (example: arrange—arrangement; appear—appearance).
- Teach core vocabulary and words with multiple meanings (polysemous words).
- Teach cognates, when and where appropriate.
- When teaching words in informational readings, use concept maps to build the understanding of the concept in relation to other critical words needed for students to understand the big concepts (see example of semantic map on Designing Mixtures).
- When teaching rare words in the narrative text, use semantic networks to teach new words for already familiar concepts (see example of the semantic network for the word *lukewarm*).

LEARN MORE

- *Text Complexity and English Learners: Building Vocabulary Parts 1 & 2* (Webinars): <http://schools.nyc.gov/Academics/ELL/EducatorResources/Text+Complexity+and+English+Lan+guage+Learners+-+Building+Vocabulary.htm>
- Accompanying article: http://textproject.org/assets/text-matters/Text-Matters_2-1_EL-Building-Vocabulary.pdf

ⁱ From R.C. Calfee (1981-1984). *The Book: Components of reading instruction* (Unpublished manuscript). Palo Alto, CA: Stanford University. [Permission granted]

ⁱⁱ A word family is a group of words connected with inflected endings and affixes such as certify, certified, certifying, certifies, certification and certificate.