

## OVERVIEW OF TIER 3, TIER 2, AND TIER 1 WORDS AND PHRASES

All three tiers of words and phrases are critical to understanding science, math, social studies, language arts, computers, fine arts, physical education, and any other subject matter. The examples in this chapter are excerpts from our Expediting Comprehension for English Language Learners™ (ExC-ELL™) study and the professional development manuals that were developed from the Carnegie Corporation of New York and the U.S. Department of Education studies (Calderón, Carreón, Slakk, Trejo, & Peyton, 2010–2016).

### Tier 3 Words

Tier 3 words are subject-specific words. They are sometimes called technical words. These are the words that convey concepts relevant to the topics being studied (e.g., in science: *protons*, *matter*, and *chemical reaction*). They represent the main concepts in the topic or theme discussed in the text and are often highlighted in textbooks and defined in the glossary. As can be seen in curriculum frameworks, these words are an important component for learning the subject and are typically found in state-related tests.

Many concepts come in phrases: *chemical reaction*, *ice ages*, *fractal geometry*, *North Pole*, and *even numbers*. When it comes to teaching concepts, we can also cluster them into phrases for ease of teaching, for example: *chaotic phenomena*, *greenhouse gas emissions*, *climate change*, and *counterarguments*.

It is important to select Tier 3 words that are key to understanding the concept and to make sure students use these words throughout the lesson to master the concept. However, most Tier 3 words cannot be taught before students read them in context, particularly words and phrases in science such as *photosynthesis* or *greenhouse gas emissions*. Unless conducting an experiment, it would take too much time to try to teach *photosynthesis* if the students do not gather all the valuable related information from a text. The text usually defines the word in the sentence where it is found, is accompanied by illustrations, and provides additional background knowledge necessary to understand the concept. In cases such as these, it is better to identify these Tier 3 words, post them where students can see

them, but tell them that they will be reading to understand the whole concept. After reading, they will discuss and participate in other activities to reinforce their meaning. (How to teach words before, during, and after reading is discussed in subsequent chapters.)

### **In Elementary Schools: Tier 3 Vocabulary Instruction**

Pre-K to 5th-grade teachers have more opportunities to teach 25 words a day. They can pre-teach five words for math, five for science, five for language arts, five for social studies, and five for electives or transition times or other daily activities. There are quick vocabulary activities for after reading or for pairs or individual students to do in centers. The most important thing to remember is that students need to read these 25 words in context. If textbooks are not available for science or social studies, theme-based texts can be downloaded from the Internet at all grade levels (e.g., READWORKS, see <http://www.readworks.org/books/passages?gclid=CJqYj93IscwCFcUmhgodw7lJng>). The writing that K through 5th-grade students do on a daily basis should be based on the mentor text they have been reading, and they should include as many Tier 2 and Tier 3 words as possible. Some teachers grade student writing based on the number of Tier 2 and 3 words that are used correctly.

### **In Secondary Schools: Tier 3 Vocabulary Instruction in Science**

In secondary schools, ELLs have double the work in learning because they have to master both content and the language of that content (Short & Fitzsimmons, 2007). Some students in secondary schools do not master the key vocabulary and sentence combinations that embody important science concepts such as *energy*, *photosynthesis*, or *osmosis* because these Tier 3 words are found in sentences that have unfamiliar Tier 2 words and phrases—maybe even some Tier 1 words as well. Speaking, reading, and writing about science largely hinges on the reader and writer’s ability to make clear connections among scientific assertions, processes, and tentative statements. The tentativeness of science is reflected through words and phrases such as *it is suggested*, *notwithstanding*,