SUBJECTS MATTER
Exceeding Standards Through Powerful Content-Area Reading
SECOND EDITION
STRATEGY: Vocabulary Predictions

FOCUS: Building Academic Vocabulary

WHEN TO USE: Before Reading  During Reading  After Reading

DESCRIPTION:
The teacher selects a set of eight to fifteen key words from the piece to be read. Working in small groups, students try their best to place the terms in a set of categories the teacher has established. Each group then creates a "gist statement," which they predict will summarize the reading. Finally, they list things they hope to discover as a result of words they didn't understand or questions that were inspired by the process.

Why Use It?

This activity takes some time, but addresses a number of important mental strategies for good reading. It leads students to use their prior knowledge, focuses on important academic vocabulary, and uses prediction to build active thinking about a topic before reading. Predicting helps readers become aware of their expectations and how the reading either fulfills or surprises them—an important aspect of learning. The activity gets students talking in small groups in a carefully organized way. It helps them become conscious of the structure of a story, argument, or explanation. Talking over the words in their groups helps students not only to notice these key words as they read but to go into the reading with their minds focused on the ideas expressed through them. Finally, the "to discover" step sets purposes for students' reading. Students can be observing, as they read, to see which of their own questions get answered in the text. As we discuss later, in Chapter 11, even struggling readers become more engaged when they are thinking about their own questions rather than those supplied by a teacher or a question section at the end of a textbook chapter.

How Does It Work?

1. Choose eight to fifteen key words from the upcoming passage, words that invoke main elements or ideas in the reading. To give kids a fair chance at speculating, the mix should include some words kids already know; some technical (Tier 3) words (please see p. 179 for a definition of these three-tier models) that will be a stretch (kids can use knowledge of word roots, affixes, or suffixes to make informed predictions.

Similarly, the words to be studied. This can also be a setting, for example, epidemic, parasite, death rate, words might be provided in a list.

2. Model the students will use whiteboard or paper to write which you hope they can also ask the teacher.

3. Provide a few minutes to write a statement, or to write a matching the reading differed, an explanation of what you learned. Some questions that appeared to be easy-of-the-week—do you wonder not just how they influence...

4. Group especially what they can't understand.

5. When the question is answered and write their unanswerable questions.
to make informed guesses); and some important Tier 2 academic terms that will not only help kids understand this particular text, but also serve them in the future, across the curriculum.

Similarly, the categories for labeling these words depend on the subject and kind of material to be studied. Typical categories for a fictional story or a biographical piece might be Characters, Setting, Problem, Outcomes, Unknown Words. For a nonfiction news article on the spread of flu strains, for example, the word list might include: virus, mutation, interspecies transmission, respiratory, epidemic, genetic shift, travelers, virulence, Centers for Disease Control and Prevention, quarantine, death rate, co-evolution. (See the great Tier 2 words in there?) Some categories for sorting these words might be Problem, Setting, Causes, People, Solutions, Unknown Words. At first you may want to provide the categories for sorting the words, but as students get accustomed to the activity, you can also ask the groups to determine their own categories (which makes this activity more like the List-Group-Label strategy (see pages 153–154).

2. Model the strategy first with a group of words on a topic in your subject, thinking aloud so the students will understand what is involved. Along with the groups of words that you arrange (on a whiteboard or projected slide), be sure to also list a few questions the words have engendered, which you hope to get answered in the reading selection.

3. Provide a few key directions: The "unknown words" category is only for terms the group does not have any inkling about. Tell students whether you want them to use all the words in their gist statement, or only a certain proportion. Explain that if their gist statement doesn't completely match the reading, there's nothing wrong—but it does show that their expectations and the reading differed, and that's important to realize. The differences can help students realize that they've learned something new, or that the information or story was more complex or surprising than it first appeared to be. And remind students to list the "to discover" questions that the words led them to ask—not just about the word's meaning but anything else that could go with it. Students might wonder not just what the Federalist Papers were, for example, but also why they were important or how they influenced the people who read them at the time they were written.

4. Group representatives briefly share with the class how they grouped their words and especially what their "to discover" questions are.

5. When the reading is completed, groups revisit the "to discover" lists to see which questions got answered and which did not. They can report these to the class, which can discuss when and how their unanswered questions might get clarified later in the unit or by some future online research.
VARIATION: If your students will be reading a narrative text like a short story, biography, or historical novel, you can do a very similar predicting activity by selecting a set of eight to fifteen sentences instead of single words (of course, you will pick sentences with great Tier 2 words in them as well as technical vocabulary). Each student gets one sentence on a piece of paper, and then students walk around the room, reading their different sentences to each other and predicting what the text will be about. When they go on to read the complete passage, students will implicitly be comparing the actual text to their hypotheses. Kids seem to find it fun when the sentences they worked with earlier suddenly pop up in the text. We call this activity a Quotation Mingle and Harvey and Nancy Steineke have written about it in another of our family of books (Daniels and Steineke, 2013).

TO LEARN MORE


STRATEGY: List-Group-Label

FOCUS: Building Academic Vocabulary

WHEN TO USE: Before Reading  During Reading  After Reading

DESCRIPTION:
The name tells the story. The class develops—or the teacher may provide—a list of twenty to twenty-five key vocabulary words from the assigned reading. In small groups, students arrange the words in clusters based on something the words have in common. In many cases, particularly if you use the activity in the midst of a unit rather than at the end, the students are unlikely to know the exact meanings of many of the words, but they should be encouraged to share their knowledge and their guesses in their groups. A cluster must contain at least three words in order to count, but words can be used more than once. The students then decide on labels for each cluster.

Why Use It?

Effective vocabulary learning requires that students work with words, think about them, and see them in a context. Like the vocabulary tree, this is about finding relationships among words rather than defining them in isolation. The thinking that is involved is somewhat different, however, because the students are creating groupings and categories for the words, rather than linear relationships. Working together, students pool their knowledge and learn from one another. Even though a student may not yet know everything he needs to about a particular word, the clusterings help the process of making sense of it, connect it with other words he knows more fully, and suggest where he might look to find out more about it.

How Does It Work?

1. At a midpoint in their reading, or after students have completed a reading selection, organize them into small groups for this vocabulary work. Balance membership in the groups, so each includes students of varying achievement levels. That way, the students can help one another, and no one group is left completely at sea. Provide a group of vocabulary items for kids to work with.
A list for a set of U.S. history readings on African American soldiers in the Civil War might look like this, including some of the military terms and Latinate words favored by mid-nineteenth-century writers and leaders:

- chattel
- edifice
- escalating
- permeated
- reprisal
- retroactive
- frock coats
- serfdom
- fatigue duty
- sagacity
- contrabands
- philanthropic
- avocation
- remuneration
- amenability
- auspices
- quartermaster
- commissary
- mustered out
- parapet

If many of these terms are unfamiliar to the students, provide time for the groups to look them up or determine them from context—after all, if the group knows nothing about the words, the activity can’t really go forward.

**2** Now, working in small groups, students can pool their background knowledge and powers of inference to place the words in clusters, however they think the words might fit together. When all the words are arranged, the students decide on a label for each cluster.

**3** After the work is finished, have students look back through the reading to see if their increased understanding of the words helps them comprehend the text better—and vice versa. To make this go efficiently, you can identify short passages beforehand that contain various of the vocabulary terms and assign each group one passage to read and discuss. Then have the groups report and explain one or more connections that they see between the words in a particular cluster and the passage that they’ve just reread.

**VARIATION:** Have the groups record their lists on newsprint, so they can be hung around the room for ongoing reference. Then kids can watch for the words as they read further. They can also add more words to the lists as they continue to read and learn about the topic.

**TO LEARN MORE**


**Why Use**

Like brain breaks, this activity provides students with an opportunity to reflect on their learning, make connections, and develop transferable skills in reading and writing. Brain breaks are an effective way to engage students, increase their attention and participation, and help them to better understand and remember the material they are being taught. In addition, this activity allows students to practice and develop their memory, comprehension, and analytical skills. By engaging in this activity, students are also able to improve their critical thinking and problem-solving skills, which are essential for success in all areas of their academic and personal lives.
STRATEGY: Clustering and Mapping

FOCUS: Visualizing Meaning

WHEN TO USE: Before Reading  During Reading  After Reading

DESCRIPTION:
The idea of graphically displaying key concepts has many variants: trees, of course, but Venn diagrams, timelines, concept maps, and semantic maps are also all in the family. You’re probably familiar with most or all of these, and information about them, not to mention the templates and lesson plans that abound. Here, we’d like to draw attention to a couple of valuable graphic organizers that are used less often.

Gabriele Rico (1983) first popularized clustering as an aid to students’ writing, describing it as “a nonlinear brainstorming process akin to free association.” Clustering is a kind of brainstorming that links ideas in a two-dimensional map, with lines to show connections based on students’ mental associations as they think about a topic, adding an important visual aspect to the process. Mind mapping is similar except that it is a more structured visual arrangement of ideas after students have completed their reading.

The teacher may provide a template or have students create their own, individually or in small groups. Both clustering and mapping can be used either for individual students’ work or recorded on a whiteboard or document camera for a whole class.

Why Use It?

Like brainstorming, clustering helps students discover things they already know—or think they know—about the topic they will be studying. In her book Writing the Natural Way, Gabriele Rico describes how clustering not only helps access ideas, but reduces the anxiety people feel as they wrack their brains about a topic. As a person thinks and perhaps gets stuck, “This relaxed receptivity to ideas usually generates another spurt of associations.” In other words, it is meant to open students up to connections and possibilities they might not have realized when they started. This is why the activity requires, like brainstorming, that all ideas be accepted, and that the students toss them in as quickly as possible, without censoring or questioning the connections they make.

Mind-mapping looks very similar, and similarly helps students to organize their thinking about a topic. However, it usually serves this purpose after a piece of reading or study is completed, enabling readers to put the pieces together, so to speak, and see how they are related. Because
clustering and maps are two-dimensional, they enable students to more easily see the multiple connections that are harder to illustrate in the one-dimensional linearity of the printed word. This strategy especially asks students to identify larger concepts in their reading, and then to group lesser elements under them. So mapping presents a great opportunity to teach a minilesson or two on this important thinking strategy. Cognitive researchers tell us that our minds, particularly in short-term memory, can deal with only limited numbers of items at once. But batching together a jumble of items in some logical way makes them one larger mental unit—your friend’s phone number is easier to remember than a separate string of ten numbers if it reminds you of a famous historical date. Understandably, as we work through a unit of study we often break it down into smaller pieces so that students are not overwhelmed and can grasp one aspect at a time. The downside of this is that they might never add up the pieces into something larger that connects with big ideas and issues in their lives. So we need to make sure that the bigger picture doesn’t get lost as we teach. This activity invites students to synthesize many aspects of an idea, rather than simply march dutifully and mindlessly through a series of tasks.

**How Does It Work?**

1. As with many of our strategies, it’s advisable to model the activity, have the class practice and compare results, and observe as students use the activity in order to help them and inform yourself about how they are doing. Use short samples of text to show students how you do this, as a competent adult reader, and to give them plenty of practice at it.

2. For conducting a clustering or mapping activity with a whole class, write a key “nucleus” word—e.g., *infinity, erosion, manifest destiny*—on the whiteboard or project it on a screen.

3. Students may work separately at first, writing the nucleus word and circling it in the center of a piece of paper, and thinking of words and ideas that connect with this word. They write these related terms around it, drawing circles around the words and connecting these with lines to the nucleus word. They then share their ideas one at a time as the teacher constructs a class diagram for all to see. As more connections occur, these get added to the diagram, with lines to show which terms they connect to. Students should do this quickly and avoid rejecting anything. If students are to create their own kind of map, be sure they understand that there are a wide variety of ways to represent their thoughts.
As with brainstorming, you can refer back to the clustering after students have read the relevant material, to help them notice which ideas emerged as important in the reading, what was surprising or different from what they expected, and what they learned. Mapping that takes place only after the reading leads to the same kinds of reflection.

**VARIATION:** There are already a couple of cool iPad apps that students can use to arrange words in variable and creative relationships with each other, very parallel to the mind-mapping and clustering they might do on paper. Popplet and Big Mind are popular right now, and there will probably be eighteen more by the time you read this.

**EXAMPLES**

Energy Science Mind Map

From *Teach Yourself Revision Guides GCSE Science* by Eileen Ramsden, Tony Buzan, Jim Freethaup, and David Apollin. Copyright © 1997. Reproduced by permission of Hodder and Stoughton Limited.
TO LEARN MORE


ACTIVITY 4: Vocabulary Word Sorts

One thing that makes textbooks so tough for kids is all the new vocabulary and the high rate at which it is typically introduced. Without some advance guidance, students have no idea where, mentally, to hang all those new words. That's why it is so important for teachers to conduct effective prereading activities focused on vocabulary, so kids enter the text thinking, on the lookout for words, actively making meaning right from the start. In Chapter 5 we shared four vocabulary strategies that also work well with textbooks. Here's another that's a special favorite.

In her eighth-grade class at Baker Demonstration School, Kathleen McKenna is preparing for a unit on soil conservation. But before she assigns the chapter in the textbook, she wants to introduce her students to some of the key words they will be encountering. So Kathleen has brought to class several sets of words, each one hand-printed on a little 1 × 3 inch piece of paper. Among the terms included:

- carbon dioxide
- subsoil
- abrasion
- conservation plowing
- decomposers
- sod
- erosion
- mites
- earthworms
- topsoil
- contour plowing
- decay
- mechanical weathering
- acid rain
- ice wedging
- chemical weathering
- conservation

Kathleen has carefully included some terms that kids already know (earthworms, sod); some familiar words that are used in an unfamiliar way (ice wedging); and others that are brand new (contour plowing). She gets kids into groups of four or five and hands each a set of word strips to work on. Her instructions are simple: “Using the best thinking you can, put these words into categories that you can agree on as a group. What goes with what? If you have no idea what a word means, then guess. Choose someone to be the official ‘spotter’ in your group and report on what you did. OK? In about five minutes, spotter be ready to explain how your group sorted the words.”

The students take a few minutes to scan the whole set, confirming some meanings and guessing at others. Then individual kids start suggesting groupings (“Let’s put the plowing ones together”), trying out different hypotheses (“I think these are different kinds
of erosion”), and dealing with anomalies (“Do earthworms erode the soil or help it?”). There’s still plenty of buzz in the room when Kathleen calls kids back together and asks the spotters to briefly share their group’s categorization scheme. As reports are collected, there’s lots of overlap in the categories, and some good questions are posed along the way (“Isn’t soil erosion a natural process too? Is it something we humans should always be trying to prevent?”).

By now it’s only ten minutes into the class, with plenty of energy present and lots of ideas left to be shared. But Kathleen just says: “Well, I guess you guys are ready to read the chapter now.” While the kids don’t quite storm the pile of textbooks, they don’t waste any time either. Within one minute, the classroom is hushed, as kids read about soil erosion and conservation. Some kids silently nod or smile as now-familiar terms pop up and categories, some predicted and some surprising, emerge.

The magic of this activity is in its process. Word sorts are pretty fun; they are social and collaborative, and if you set them up right, they go very quickly. In Chapter 5, the similar List-Group-Label strategy is structured for learning vocabulary during or after reading. But the goal in this case is not for kids to correctly classify all the vocabulary or even know what all the words mean before they read the selection. In fact, a wrong guess is just about as useful as a right one, because it still prepares the kid to meet the word in the textbook (Kornell, Hays, and Bjork, 2009). There, he can confirm or disconfirm his prediction; either way, that’s an active process and a big help in remembering. So word sorts, even when kids don’t know the definitions, set a purpose for reading: they get students watching for key vocabulary and prime them to stop and think when those words appear in the text.

**ACTIVITY 5: Textbook Circles**

In Chapter 9, we introduce a small-group reading activity called book clubs. This structure is simply a school adaptation of the adult reading groups you sometimes see meeting in bookstores, libraries, or maybe your own living room. Basically, this is just people picking books they want to read and talking about them with their friends. In school, we mainly use this structure when students are reading trade books connected to a teaching field—like historical novels set during the Civil War or biographies of famous scientists (genres specifically recommended by the new Next Generation Science Standards). But some teachers have also successfully applied the book club structure to textbooks. There are a few challenges. Most textbooks don’t provide the narrative structure or emotional engagement that novels or trade nonfiction books typically do. Still, even if textbooks are a little dry and overpacked, the social