Students encounter many unfamiliar words as they read their content texts. These words can be divided into two categories: those with meanings students have experienced but have no knowledge of the particular word, and words for which the students have no meaning in the first place. Students are not alone in this. Can you give meanings for the words dottle, doughty, and doited? These are not very common words, and most people don’t know the meanings associated with these words. But, if you go to your dictionary and look them up, you will discover that although you did not know the words, you had experienced the meaning associated with those words. A dottle is the half-smoked tobacco left in the bottom of a pipe. A doughty woman is steadfast, courageous and resolute. Doughty women seldom become doited— feeble minded and senile.

Now try to give meanings for capsomeres and centromere. If you can’t, look them up in your dictionary. You will discover that capsomeres are protein units that combine to form the capsid of a virus and that the centromere is the structure that holds together a pair of chromatids. Now, do you know what capsomere and centromere are? For most of us, capsomere and centromere are examples of words for which we lack both the word and the meaning those words represent. Dictionaries are very helpful when we look up a word for which we already have experienced the meaning but just don’t know the particular word that represents that meaning. Dictionaries are less helpful when we lack both the word and the meaning it represents.

As you try to help students learn word meanings, you should divide the words you wish to teach into two categories. Words such as dottle, doughty, and doited can be taught by reminding students of the meaning they already have. Do this by telling them, “You may not know the word dottle, but you have seen it. Dottle is that half-smoked tobacco in the bottom of the pipe.” You can also have students look up the word in the dictionary and have them perform other common activities, such as figuring out the meaning from the context, and completing crossword puzzles and cloze exercises. These strategies all operate on a “symbolic” level because they use words, spoken or written symbols, to remind students of a meaning they have experienced and to help students associate the old meaning with the new word.

Different strategies are called for when teaching words like capsomere and centromere. Most students don’t know the words capsomere and centromere and have never known the meaning that these words represent. For words like these, you must provide students with experiences from which to build the meaning. The most lasting experiences are first-hand direct experiences. Do you remember how you learned what an elephant is, what it means to saunter and what obnoxious people are like? Did you go to the zoo and have someone talk to you about the elephants? Did you walk leisurely alongside a harried adult who told you there was not time for you to just saunter along today? Did you watch someone behave badly and embarrass everyone present and hear
that person described as “the most obnoxious character I have ever met”? We all learn an incredible number of words and meanings by being in the experience and hearing the appropriate words used to describe the experience. Later, we use those words ourselves to describe similar experiences. If you learned meanings for elephant, saunter, and obnoxious by actually experiencing them, you learned them through direct experience.

We all know meanings for many words which we have not directly experienced. Do you have meaning for the word Taj Mahal, even if you haven’t been to India? Do you have meaning for the word slalom, even if you have never been skiing? We acquire meanings for things we have not directly experienced through the visual media. Television, movies and still photographs contribute greatly to the meanings we associate with words. Thus, the second major way in which we acquire meanings for words is through visual experience.

Finally, we build meanings for words through analogy. Imagine that you are reading about a wombat, a “thing” you have never seen, in reality or in pictures. How can you build meaning for this word? Perhaps the story you are reading tells you that a wombat is a marsupial and is about the size of a badger. You can use what you know about marsupials (they have pouches like opossums and kangaroos) and about badgers (a burrowing mammal) and construct some meaning for wombat. When you construct meaning for something you have never experienced directly or visually, you compare and contrast the unknown to things you already know. “It’s a little like this . . . but different in these ways. . . .” When you use what you know to construct meaning for what you don’t know, you are constructing meaning by analogy.

Meanings for words are built through direct experience, visual experience or by creating analogies to other words whose meanings were built through direct or visual experience. But meanings for words are not generally built one word at a time. If you learned the word elephant during your first visit to the zoo, you probably also learned many other words, including names for animals—giraffe, hippopotamus, baboon; words that described animals—gigantic, ferocious, smelly; words for actions—swat, roar, wallow. The possibilities for expanding your vocabulary during a day at the zoo are too numerous to even begin to list. As part of the meaning you built for these new words, you learned many relationships between these words. Imagine that a special machine could X-ray the “zoo file” in your long-term memory as you exited the zoo. What would all your new words and meanings look like? The new words and meanings would probably be displayed in an enormous web or chart which showed the new words in categories and with important features attached to each. The new words would not appear in an alphabetical list of words with definitions attached to each.

Generally, we do not learn new words one at a time. Rather, we learn a set of new words that are related to a particular topic, and we learn how these new words and meanings connect to each other. Because content-area teachers are teaching about various topics, they are in the best position to help students build many new word meanings in this efficient topic-related way. In the remainder of this article, five strategies for building meaning for words will be described. Each strategy involves students in direct experience, visual experience, analogy or some combination of the three. In addition, each strategy allows students to learn a variety of topically-related words and the relationships between these words.
The Real Thing

The Real Thing is exactly what it sounds like. You want the students to develop a meaning, so you bring the thing to them or take them to the thing. Field trips are often intended to show students the real thing. If you have taken students to a nature science center to observe plants or to a hydroelectric plant to see how electricity is generated, you were providing students with real experience on which to build meanings for words such as angiosperm, gymnosperm and bryophyte or generator, watts and hydroelectric. However, field trips are expensive and time-consuming, and often the things you need to see are not available at a reasonable distance from the school.

When you can’t take the students to “it,” the next best thing is to bring it to the students. Learners at all levels learn something best when they have actually seen it, touched it, smelled it, listened to it and even, on occasion, tasted it. Science experiments, visiting experts and cultural artifacts are examples of ways teachers bring real things to classrooms to provide direct experiences.

Sometimes the actual thing could never be available for students to interact with, but a model could. Models of brains, Mayan villages or various molecules, while lacking the size and other features of the real thing, are still three dimensional representations that can be explored by the senses. We can provide students with the real thing, even when the word for which we are building meaning is not a noun. This is true in life and in classrooms. You provide students real experiences with verbs like grimace, sally and lambaste by showing them how and then letting them do them. You provide real experience for students with concepts such as judicial process by simulations in which each student has a part and the class participates in a mock trial. Because of time and other constraints, not all meanings can be developed using The Real Thing but the time and effort involved in providing the real thing must be weighed against the depth and the permanence of the learning that takes place and the interest that is generated.

Skits

Skits are a version of The Real Thing. A skit is a short drama. To prepare for one, write a short description of the skit, including the number of “skitters” needed, a sentence containing the word used with the meaning to be “skitted”, a short description of what the skitters should try to get across and questions the skitters ask the audience after completing the skit. Here is an example for the unfamiliar word and meaning, negotiation:

<table>
<thead>
<tr>
<th>Negotiation</th>
<th>Skitters needed: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example sentence:</strong> How two teenagers would share one car was the subject of much conflict and was finally resolved through negotiation.</td>
<td></td>
</tr>
<tr>
<td><strong>Skit:</strong> A brother and a sister have one old jalopy which they must share. They always seem to need it at the same time. They argue constantly about who had it last, who should have it now and who puts gas in it. Finally, Mom tells them that they either reach an agreement through negotiation or she is taking it away from both of them. The siblings sit down and hammer out an agreement.</td>
<td></td>
</tr>
<tr>
<td><strong>Questions to ask audience:</strong> What did negotiation mean in our skit? Have you ever been involved in conflict and negotiation?</td>
<td></td>
</tr>
</tbody>
</table>
The teacher prepares for the lesson by writing out a skit card similar to that shown. Then the teacher gives that skit card to the skitters so that they have time to prepare. Often, the teacher has a skit day and divides the whole class into teams of two-to-four members, giving each team a skit card and allowing five minutes for team preparation. During the preparation time, students flesh out what they will say and do in order to clarify the meaning of the target word. Dictionaries, the teacher and any other reference can be consulted.

As each group of skitters comes up, they write the target word on the board and pronounce it. Then, trying to sneak the target word into the skit as often as possible, they do their skit. If the skitters have done a good job, the watchers should be able to answer the questions about “What did the word mean in our skit?” The second question, “Have you ever?” is intended to help the watchers access any experience they might have had with the target word and put that word with that experience. Skits are especially valuable when you are trying to teach an unfamiliar meaning for a multimeaning word. Most students know what fog is, but many don’t know what it means to be “in a fog.” A skit in which this use of the word fog was skitted would help students to see the related meaning for the word fog.

A Picture Is Worth a Thousand Words

Visuals provide us with the next best thing to being there. All of us have numerous words for meanings that we have not experienced directly but have developed through movies, television, photographs, paintings, diagrams and maps. Imagine trying to explain the Grand Canyon to someone who has never seen it. Describe with words the color teal, what fencing looks like, or life at the bottom of the ocean. Your words are meaningful only to those who have seen what the word represents.

Fortunately, we are surrounded by visual stimuli. Television programs offer great possibilities for content teachers to capitalize on what their students spend their time with anyway. Most school system media centers contain many films, filmstrips, and other visual aids that suffer from underuse. As you consider how to build meaning for words, ask yourself, “Where could I find a picture of this?” Often, the answer is as close as your textbook. Textbook publishers spend a large portion of their budget providing students with photographs, realistic art and maps to present the concepts visually.

When you have the list of words for which you must build meaning, look at the textbooks and other books you have available. Note page numbers where various concepts are portrayed visually. You can introduce these concepts by writing the word on the board, pronouncing it and having students pronounce it with you, and directing their attention to the appropriate visual in the text.

In addition to visuals found in books, go on a hunt for slides, still prints and filmstrips that portray what you want to show students. Filmstrips are an often overlooked source because most teachers think of showing the filmstrip as a whole. Often, a filmstrip contains several frames that vividly portray the concept you want to develop. In such a situation, you set up the filmstrip to show these frames only. Titles of filmstrips often give clues to what you will find there. If you are looking for a picture of a camel, a filmstrip on “The Desert” is a good place to look.

Of course, you should consider films and videotapes. While you might want to show just a portion of a film or a videotape to develop meaning for one word, you may
discover that you want to show the whole thing and develop many new words and meanings from this one resource. Students who have listed what they already know, what questions they would like to have answered and what words they should be trying to define will get more than just enjoyment (or boredom!) out of watching a film. Since there are many concepts to develop, you will probably want to show the film more than once. The second time around, consider stopping the film at points where questions are answered or meanings for words developed. Record those meanings on a chart, or have students record them in their notebooks. After pausing to think and record, continue showing the film.

Finally, when considering visuals, one is good and two is twice as good. Remember that acquiring the meaning of a new term is not a “one time—now you’ve got it” affair. Your meaning for *mountains* is not just based on having seen one picture of one mountain. If you have several visuals to share with students, they will acquire a greater depth for their meaning of the word than if they see only one. In addition to broadening their concept, each visual provides review of the meaning represented by the word.

**Scavenger Hunts**

Have you ever had real, firsthand experience with a scavenger hunt? Have you actually gone on one, gathered up assorted stuff and competed to be part of the team that found the most stuff in a limited time. If you have not had firsthand experience with a scavenger hunt, perhaps you have had visual experience. You watched others go on one. Scavenger hunts are fun because they are competitive and they develop a sense of team spirit (see Florida Center for Instructional Technology (2006) for an Internet version).

To have a scavenger hunt (Vaughn, Crawley and Mountain, 1979) that helps your students get involved in collecting real things and pictures and thus building meanings for words, follow these steps:

1. Make a list of items for which you want students to scavenge. Include on this list anything for which students might be able to find a real object or model or picture. Your list should include words for which you need to build meaning and which can be represented by objects or pictures. Add to this list some common, well-known, easy-to collect items so that some of the finds will be easy and immediately satisfying. Scavenger hunts can be conducted in all content areas. If you are going to have your students read some of Dickens’s novels, you may want to give them a list of words which includes common household implements (andirons), clothing (waistcoat) and food (gruel). Many biology and earth science topics lend themselves well to scavenger hunts. You could even have a scavenger hunt in geometry, using a list such as these:

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parallelogram  rhombus  scalene triangle  kite  square
isosceles triangle  rectangle  heptagon
pentagon  hexagon  trapezoid
equilateral triangle  nonagon  oval
octagon  circle
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2. Divide your class into teams of three or four students. Ask your students to share experiences with scavenger hunts. If necessary, explain how scavenger hunts work. Be sure students understand that they must bring objects and pictures on the date due and
that the team should keep secret which item's were collected and where the items came from.

3. Give each team your list. Tell the team they get two points for each object or model and one point for each picture. Pictures may include drawings and tracings (you may want to make tracing paper available). Only one object and one picture can be counted for each word. Let the team choose a leader (or you appoint one). The leader should read the list and lead the group in a discussion of who thinks they can find what and where. Set a date for students to bring objects and pictures to school. One week is a reasonable amount of time. Do not allow objects and pictures to be displayed before the due date.

4. Allow the teams to meet briefly once or twice more to check things off their lists and see what is still needed. Be sure to promote an atmosphere of secrecy and suspense. If students protest that “No one could find a . . . ,” assure them that “No one could possibly get objects or pictures for everything. The goal is to collect as much as you can.” This will generally result in some students making sure they have a picture, if not an object, for everything just to prove you wrong!

5. On the appointed day, let teams meet and tally up their points. Double-check the teams’ figures. Count drawings and tracings when they adequately represent the word. The winner is the team with the most points. Reward the winners by giving them free class time to put up the bulletin board. Attach cards on which each word is printed to the bulletin board and arrange all the pictures representing that object in collage fashion around the word. Objects that are not alive, dangerous or valuable can be labeled and placed on a table near the bulletin board.

Scavenger hunts are fun and, more importantly, they involve your students in preparation for the unit. The assignment is best done a week or two before you actually begin the unit for which the objects are being collected. By the time you get ready to explore the topic, your students have a lot of information about the subject and interest in it. In addition to learning the meanings of the words on the list, students often pick up incidental information as they peruse magazines looking for pictures and talk to people who are apt to have objects to loan. Another benefit of Scavenger Hunts is the ratio of teacher work to student work. To do a Scavenger Hunt, you make the list, form the teams, arrange for them to meet a few times and check their tallies of the points. The students do the rest—including the often onerous task of making the bulletin board!

**Analogizing**

Analogy is sometimes used in a narrow, strict sense to mean statements such as “summer is to hot as is to cold.” However, in the context of teaching word meaning, we want to use analogy in its broader, real-life comparative sense. Here, analogizing is used in the sense of connecting ideas to help students develop a concept for a word that you can’t represent with firsthand or visual experience. Rather, you think of something they do know that is like the unknown thing you wish to teach them. The idea that cricket is a lot like baseball is an analogy.

To analogize something, you must first think of something your students are apt to know that is like the thing they don’t know. It is important that students know the thing being used to teach the unknown thing. Telling someone that cricket is a lot like rounders is not helpful if that person doesn’t know rounders either.
To present the analogy to the students, first ask them what they know about the known thing. In the cricket/baseball analogy, you would ask students what they know about baseball. Get out the relevant traits, adding to the information they give you as necessary. Next, tell them that baseball is a lot like cricket and point out the similarities. Finally, tell students how cricket is different from baseball.

Here is an analogizing example from the social studies. Imagine you want to teach the students about monopolies, competition and antitrust legislation. You could use as your analogy a situation that might occur if some students decided they weren’t happy with the food and drinks provided during sporting events. Ask the students what they could do if they thought that the prices of the food and drinks available in the concessions were too high priced, or not nutritious enough, or inadequate in some other way. Of course, the students could complain to the school officials, but what if the school were unwilling or unable to correct the problem? Or what if some students decided that setting up their own concessions would allow them to make some pocket money and at the same time have better concessions. The students bake items to sell and buy and set up their own stand during the next home game. It is a great success—for one day. The school then tells the students that only the school is allowed to have concession stands. What can the young entrepreneurs do now? Perhaps they could present a case to the school board. Perhaps the school board would agree to open up the concessions to other vendors and make this official policy. Once students understand how this situation might occur and be resolved, you could introduce the terms monopolies and antitrust legislation. Students would see that the school had a monopoly on the concessions and that competition was not allowed. The school board’s change of policy to allow competition would be similar to the Sherman Antitrust Act.

Summary
Vocabulary instruction often consists of “looking it up and memorizing the definition.” In addition to being a tedious, passive exercise, this type of activity is ineffective if the words students need to learn are words for which they have no meaning. Students build new meanings through direct experience, visual experience and by creating analogies to meanings they already have. They learn new words not in isolation, one at a time, but in groups of topically-related words. This article has described five strategies that content-area teachers can use to help students meet these requirements.

References