WORD KNOWLEDGE **SAMPLE LESSON**

Generating Examples and Nonexamples

ACKNOWLEDGMENTS

Adapted with permission from Frayer, D. A., Frederick, W. C., & Klausmeier, H. G. (1969). *A schema for testing the level of concept mastery* (Technical report No. 16). Madison, WI: University of Wisconsin Research and Development Center for Cognitive Learning.

INTRODUCTION

There are two reasons for providing students with, or having them generate, examples and nonexamples of unfamiliar words.

First, providing both examples and nonexamples can help clarify the meaning of words—students who receive vocabulary instruction that provides more contextual information outperform students who receive only definitions of words (Baumann & Kame'enui, 1991; Blachowicz & Fisher, 2000; Stahl & Fairbanks, 1986). For example, you might read the following sentence, "In the logographic phase beginners recognize nonphonemic characteristics." A straightforward definition for logographic is "representing words or ideas rather than sounds." Even after hearing this definition, the meaning of the word is probably not perfectly clear. Providing examples and nonexamples of things that are logographic should help you have a sharper understanding of the term. An example of a logographic language is Chinese, and logos found in advertising materials are also logographic. English, Spanish, and Italian are not examples of logographic languages. Your background knowledge will probably help you understand that characters or symbols in logographic languages represent whole words or ideas rather than sounds, as is the case in alphabetic languages. Beginning readers recognize logos (such as the McDonald's arches) or whole words (such as Wal-Mart) and connect them with ideas rather than using letter-sound relationships to read the words.

The second reason to provide students with examples and nonexamples of words, or to have students generate examples and nonexamples, is that this can help them develop an understanding of the concepts underlying key content-specific words. For example, it is critical that students understand various science concepts such as *matter*, *energy*, and *reactions*. When students engage in generating examples and nonexamples of these key concept words, they develop a deeper understanding of the concepts themselves.

One framework for organizing examples and nonexamples of words is a graphic organizer known as the Frayer Model (Frayer, Frederick, & Klausmeier, 1969). This lesson will focus on teaching students to use the Frayer Model, focusing on a science term—*amphibian*. Although this lesson is based on a science text, reading teachers may use the same process to help students learn to generate examples and nonexamples of words in any expository or narrative text. It can be important for reading teachers to teach lessons actually using students' content area textbooks, to encourage students to generalize what they are learning in the reading class to other classes throughout the day.

OBJECTIVE

Students will develop a deep understanding of key words by generating examples and nonexamples of words.

MATERIALS

- Text (narrative or expository).
- Overhead projector, chalkboard, or chart paper.
- Two overhead transparencies of a blank Frayer Model graphic organizer (or drawn on chart paper or on the board; see Appendix).
- Copies of blank Frayer Model graphic organizers for students.

PREPARATION

Preview text looking for academic words and key content-specific words that represent central concepts in the text. Identify one or two important words that are closely related to the topic of the text and that are good candidates for teaching students to generate examples and nonexamples of words. If it is difficult for the teacher to think of clear examples and nonexamples of a term, it is not a good choice to use when students are just learning the strategy.

DAILY REVIEW

Teacher:
We have learned that scientists classify animals as vertebrates or invertebrates according to whether the animals have a...what...Joseph? Yes, a backbone, or spine running down their bodies. Yesterday we learned that we can separate the vertebrates into classes, or smaller groups. What class of vertebrates live in water and breathe with gills...Samantha? Yes, fish. Today you will learn about another class of vertebrates.

STATE OBJECTIVE/PURPOSE

Teacher:
Today we are going to learn to generate examples and nonexamples of important vocabulary words. Listing examples and nonexamples of words can help you have a better understanding of important words and can help you remember these words.

MODEL AND TEACH

Genre: Narrative or expository
Grouping: Whole class

1. Explain the concept of examples and nonexamples using a simple word.

   Teacher:
   Let's think about the word *animals*. What are some examples of animals?

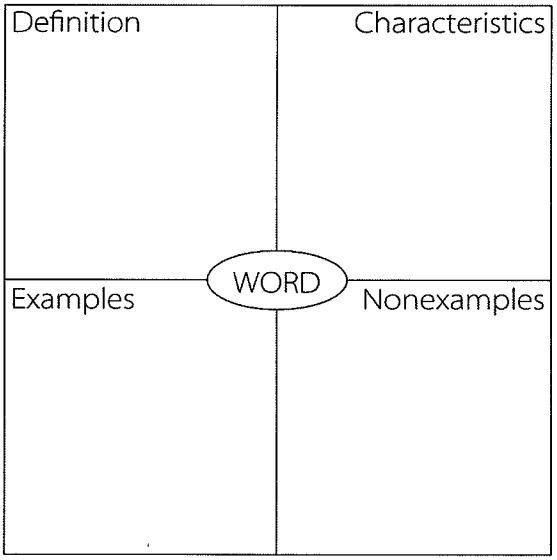
   Accept a few student responses. Don't allow more than a minute or so for this.

   Yes, dogs, snakes, goldfish, and tigers are all examples of animals. A nonexample would be a word that is *not* an example of an animal. That could be almost anything, couldn't it? After all, a boat is not an animal. Neither is a house. But, these nonexamples won't help us understand and remember what animals are. The trick is to come up with nonexamples that are related to the word, but that are not examples of the word. A nonexample of an animal would be a bean plant. Plants are like animals because they are living things, but they are not examples of animals. Another nonexample of an animal is a bacteria. Bacteria are living things but they are not animals. What are some other nonexamples of animals?

   Accept student responses and provide guidance as necessary.

2. Show students the transparency of the blank Frayer Model graphic organizer. Tell them that they will be using it as a framework as they talk about examples and nonexamples of words. Point out that the word will be placed in the center, and that there are spaces to write a definition, characteristics, examples, and nonexamples of the word.

FIGURE 74. BLANK FRAYER MODEL.



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3. Distribute blank Frayer Model graphic organizers to students and ask them to copy the information from the transparency as you model the process. Tell them that they will be completing several of these graphic organizers and that they should keep them to use as study guides.

4. Model completing the Frayer Model graphic organizer for the classification *amphibian*. Place the word *amphibian* in the center of the graphic organizer. Think aloud as you write a definition of the term, list characteristics of amphibians, list examples of amphibians, and list animals that are not amphibians in the "Nonexample" space.

Teacher:
Yesterday we learned about the class of vertebrates called amphibians. I'm going to put the word *amphibian* in the center of the diagram. We learned that a scientist would define an amphibian as an animal that lays eggs in the water, but can live on land or water. I'll write that definition in the first box. That definition had some of the characteristics of amphibians in it, but I know some other characteristics of amphibians. They are cold-blooded vertebrates, they lay eggs in water, they have a two-stage life cycle, they have moist skin, and they have no claws. I'll put those in the box called "Characteristics". Now I need some examples of amphibians. What are some examples you know of...Ta'Michael? Good, a frog is one example. A toad is also an amphibian, so I'll add that.

Accept answers from the class. Ask students to tell why their examples are classified as amphibians. If any suggested answers are not examples of amphibians, talk about why this is true.

Now for nonexamples of amphibians—I could write the words *boat* and *story*, but those words wouldn't help me understand more about what an amphibian is, would they? I want to choose words that are related to the word *amphibian*, but are not amphibians. I'm going to write *crocodiles*, since a crocodile is a vertebrate but not an amphibian. Let's add three more nonexamples. Crystal, can you think of one?

Your completed graphic organizer may look something like this:

FIGURE 75. COMPLETED FRAYER MODEL EXAMPLE.

Definition	Characteristics
Animals that lay eggs in the water, but can live on land or water	Cold-blooded Vertebrate Lay eggs in water 2-stage life cycle Moist skin No claws
amphibian	
Examples	Nonexamples
Frogs Toads Salamanders Newts	Crocodiles Alligators Turtles Snakes

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GUIDED PRACTICE

Grouping: Whole class or small group and partners

1. Put a blank Frayer Model transparency on the overhead and distribute blank Frayer Model sheets to partners.
2. Write the key content-specific word in the middle of your graphic organizer and ask students to do the same.
3. Tell students that they will complete the graphic organizer together as they read the part of the lesson. Before reading the text, provide clear "student-friendly" definitions of the key content-specific word and any other key vocabulary and have students quickly preview the selection, examining illustrations, headings, subheadings, etc. Previewing should take no longer than 1–2 minutes. Ask students what they think they will learn in the selection. Allow no more than 3–5 minutes for this discussion.
4. Have students read the first part of the lesson with their partners. (See directions for partner reading on page 225.)
5. After students have read the first section of the text, work as a class to complete any part of the Frayer Model graphic organizer that can be finished based on that section. Ask students to tell *why* the terms they identify are examples and nonexamples of amphibians.
6. Read the next section of text and continue to add to the graphic organizer as appropriate.

INDEPENDENT PRACTICE

Grouping: Partners

When students are comfortable with the process, have them continue to work in partners, reading and adding to their graphic organizers. Monitor student work carefully and provide scaffolding and feedback as needed.

GENERALIZATION

Teacher:
How might writing down examples and nonexamples of words help you in your other classes?

Student:
We can use them to study for our science or social studies tests.

Teacher:
Yes, the Frayer Model graphic organizers can be helpful as study guides. How might completing them help you understand what you are reading?

Student:
If we don't really understand the important words we won't know what the book is trying to say.

Student:
Yes, we can work together and do the examples and nonexamples of important words in social studies like *colonies*, which we are studying now. Then we might understand the book better and make better grades.

Teacher:
That's a good idea. All of your teachers are getting together to talk about using these Frayer Models in different classes, so your other teachers may give you time to work on them when you read your textbooks. If not, you could do them during study hall or after school to help you study.

MONITOR STUDENT LEARNING

Check graphic organizers for completion and accuracy. Ask students to tell why they put certain words in the "Example" or "Nonexample" boxes.

PERIODIC REVIEW/MULTIPLE OPPORTUNITIES TO PRACTICE

1. The next day, review the use of the Frayer Model and the concepts related to the term *amphibian*. If needed, allow students to refer to the Frayer Models they completed the day before to help them recall characteristics, etc., of amphibians. This helps illustrate to students that these models may be helpful study guides. Frequently, have students work in partners to generate examples and nonexamples of key concept words before reading a text selection. This is especially helpful for expository text. Use students' science, math, or social studies textbooks for review and practice of the strategy.

2. On other days, ask students questions that require them to connect two unrelated vocabulary words (Beck, McKeown, & Kucan, 2002). These may be words that were learned at different times associated with different text. For example, you might ask:

    - Can an *amphibian* live in a *lagoon*? Why or why not?
    - How is *digestion* like an *expedition*?
    - How would you find the *diameter* of a *crustacean*?
    - Could an adventurous person be *renowned*?
    - When might a *courageous* person escape from a dangerous place?
    - Can you be unaware of an *audible* sound?
    - How is being *suspicious* different from being *thoughtful*?
    - Can *collaboration* be *compulsory*?

Always ask students to give reasons for their answers. There can be more than one correct answer to these questions. The important thing is that the student's reasoning reflects the true meaning of the vocabulary words.

12. Use vocabulary words often in the classroom in the course of normal conversation and provide many opportunities and encouragement to students to use vocabulary words, especially academic words. (See p. 137 for a definition of *academic words*.)