

Lesson Plan for a Mathematics Class

Vocabulary Self-Collection Strategy

(Note: See *Literacy and Learning, Vocabulary Self-Collection and Morphemic Analysis* video lesson for an illustration of this lesson in action.)

Topic: Geometry

Objectives: The student will ... (to be completed by the classroom teacher)

Set Induction: The teacher explains that many words have specific meanings in mathematics, for example, the word *gross*. The meaning of *gross* in mathematics is 144 (12 dozen); another meaning for the word is vulgar or distasteful. Some mathematical terms related to geometry will be discussed in this lesson.

Activities:

1. In small groups students generate a list of words found in the geometry chapter in their texts. They are to select several words that the group considers important. They are to list the words and find the meanings. The index and dictionaries can be used to define the terms selected.
2. Words are submitted by the groups to develop a class vocabulary list of important words related to the topic of the chapter. As each word is recorded, its meaning and importance is shared with the class. The teacher may also add his/her selected words to the list. An example entry is *bi*, meaning two. Mathematics applications are *binomial* and *bisect*; general usage words are *bicycle* and *bifocal*.
3. The final class list is formed by having students delete any duplication, words already known, and/or words the students do not wish to learn. Definitions are clarified and students record the vocabulary words and their definitions in their individual math journals. Individuals may add some of the deleted words to their individual journals.

Closure:

In pairs, the students can call the words from the class list to each other asking for correct spellings and definitions.

Evaluation Suggestions:

The self-collected vocabulary words can be included in the chapter assessment.

Resources and Materials:

Board or chart paper, text books, dictionaries, and markers

Other Applications:

The VSS strategy can be applied throughout the school year. Although the strategy is especially useful in the area of geometry because of its large number of content-specific words, every strand in mathematics has some specific terminology that needs to be clearly defined. Additionally, this procedure is effective in various content areas to help students learn technical or specialized vocabulary.

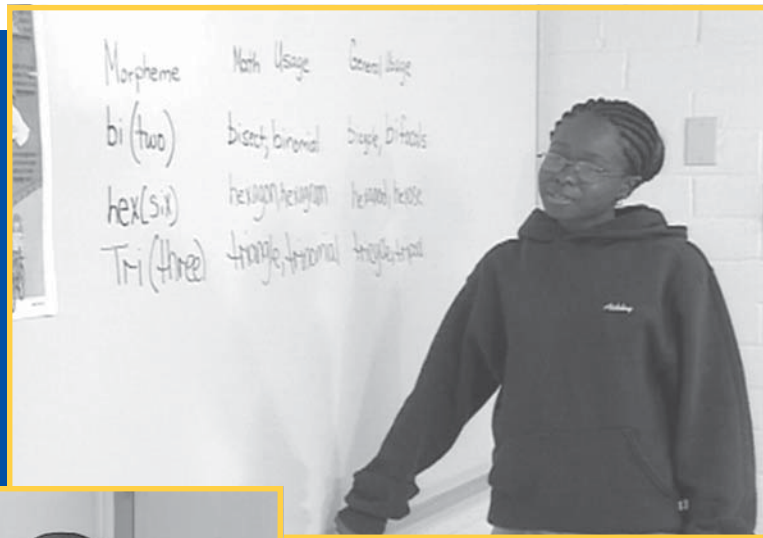


Literacy Strategy

Morphemic Analysis

A morpheme can be defined as the smallest unit of language that has an associated meaning. This small unit cannot be subdivided into smaller units that have meaning. Thus, the purpose of morphemic analysis is to study the morphemes of words to aid in understanding the meaning of those words. In mathematics, this literacy strategy can be applied to study meaningful parts of words. For example, the word triangle has two morphemes, *tri* and *angle*. These morphemes mean three and the relationship of rays respectively; thus, a triangle is a three-sided or angled figure.

Morphemic Analysis in the mathematics classroom involves selecting words, identifying a morpheme of that word, defining the morpheme, identifying mathematics words with that morpheme, and relating it to words of general usage with the same morpheme. Going through this process with students helps them understand the meanings of specific words and the relationships between words. For example, *tri* in *tripod* means three and *tri* in *triangle* means three as well. In the mathematics classroom, students in small groups can identify difficult terminology. As a whole class, the students can create a chart listing a morpheme, mathematics words that use that morpheme, and finally general usage words that use the same morphemes.



Morphemic Analysis