**TEACHING MATHEMATICS VOCABULARY**

**Dictionaries**

---

**HOW DO TEACHERS HELP STUDENTS BECOME MATH LITERATE?**

Communicate mathematics
- Speak math words
  - Includes pronunciation and knowing what part of speech
- Spell math words
- Understand the meaning or multiple meanings
- Write math words and symbols that represent the words

---

**DO YOU USE A DICTIONARY IN THE CLASSROOM?**

- By your desk?
- Individual copies for students?
- On-line access?
- What kind of dictionary?

---

**WHAT DIFFERENT TYPES OF DICTIONARIES ARE AVAILABLE?**

- General English dictionaries
  - Unabridged
  - Vast, heavy books
  - Multiple volumes
  - Webster’s Unabridged Dictionary
    - 300,000 to 600,000 entries
    - Pocket and paperback dictionaries more useable
- Special purpose dictionaries
  - Abbreviations, slang, synonyms, Thesaurus, lexicon, glossary, spelling dictionary, reverse dictionary, rhyming dictionary
- Subject dictionaries
  - Specialized - math, science, art

---

**MATH DICTIONARIES**

- How to use a math dictionary
  - Know when to use
  - Know how to locate a word
  - Know parts of dictionary
  - Choose between multiple meanings
  - Applying the meaning
KNOWING WHEN TO USE
• How do we know students are uncertain about the meaning of a word?
  • How do you know when this is the case?
    • Pre-test
    • Word problems—Don’t succeed with word problems
• use a concept of definition map
  can be part of the instruction about how to use a dictionary

CONCEPT OF DEFINITION MAP
- What is it?
- What is it like?
| 2 numbers, one over another | Half an apple |
| Represents part of a whole | ½ or 1/3 |
| Not a whole number | a/b |
| A number that is part of a group | Like division |
| One whole number divided by another whole number | proper |

DICTIONARY KNOWLEDGE TEST
• http://wps.ablongman.com/long_licklider_vocabulary_1/45/11762.cw/index.html

PARTS OF A DICTIONARY
• Guide words
  • Alphabetized words at the top of each page or double page spread.
  • First guide word is the first word on the page
  • Second guide word is the last guide word on the page
  • Have students practice finding which pages word definitions will be found

PARTS OF SPEECH
• Traditional grammar classifies words based on eight parts of speech: the verb, the noun, the pronoun, the adjective, the adverb, the preposition, the conjunction, and the interjection.
• Each part of speech explains not what the word is, but how the word is used. In fact, the same word can be a noun in one sentence and a verb or adjective in the next.

HOW TO USE A DICTIONARY
• A dictionary will give you the following information about a word:
  • spell
  • plural and singular forms
  • capitalized or abbreviated?
  • break the word into syllables
  • pronounce the word
  • part of speech of a word
  • Different meanings that the word has, as well as synonyms (same meaning) and antonyms (opposite meaning)
  • the word used correctly
  • prefixes and suffixes
  • special uses of the word
  • history of the word
  • Other words derived from the main word
Special sections in some dictionaries tell you about:
- Foreign words and phrases
- Abbreviations
- Addresses of colleges or government offices
- The population of cities and countries

Applying the following pointers will save time when you use a dictionary:
- Know and use proper alphabetical order
- Use guide words to save time
- Check all abbreviations and symbols in the special sections
- If at first you don’t succeed in finding the word, don’t give up. You might need to check several possible spellings before finding the word
- Substitute the meaning you find for the word in the sentence. Be sure you select the most appropriate meaning, not merely the first one you come to
- Try saying the word aloud after you look at the pronunciation key.

In Spanish it will tell whether masculine or feminine noun

On-line math dictionaries
A math dictionary for kids http://www.amathsdictionaryforkids.com/
List of on-line math dictionaries http://www.mathpropress.com/glossary/mathDictionar1es.html
InterMath http://intermath.coe.uga.edu/dictionary/homepg.asp
Math and Reading Help http://math-and-reading-help-for-kids.org/math_dictionary_for_7th_grade.html

Florida State University MATH http://www.math.fsu.edu/Virtual/index.php?f=4
Everything math http://www.everythingmath.net/math-dictionary.php
Bi-lingual math dictionary http://www.cunymath.cuny.edu/?page=dict

Let’s talk it through.
I don’t want to write it on the board in case I make a mistake.