

Teaching Math Vocabulary Effectively

Summary: Math-specific vocabulary can be tough to teach because of how technical it can get. In an article for *Teaching Children Mathematics*, a pair of researchers discuss the ‘when’ and ‘how’ of effectively teaching math vocabulary.

Practical Applications

The authors suggest that teachers need to focus on whether the mathematics involved with the words is *new* or *review* (say, perimeter) and whether the context involved with the words is *new* or *review* (meaning, the context in which the math problems are set up, such as finding the perimeter of a farmer’s fields). Specifically:

- If the context is new – say you are working with a population of students that has little familiarity with farming, so words like ‘acre,’ ‘crop,’ and ‘wheat’ might be so strange as to throw off students’ ability to access the math concepts – it is important to preview the context words at the beginning of the lesson. The teacher should also consider whether the context can be changed or whether context from something the class is doing in another subject can be used (e.g. finding the perimeter of a lake, if the class is studying amphibians in science), as a way to save time.
- If the content is new – the math concept hasn’t been introduced before – the teacher should consider whether students can be led to understand the basic concept without having the vocabulary previewed. For instance, multiplication can be taught with words like ‘groups’ – the advantage is that students will have knowledge to connect to when the teacher goes over the math words of ‘multiply,’ etc. However, other concepts, such as perimeter, may be difficult to lead students to without using the term, and so should be previewed at the start of the lesson.
- When planning to introduce new words, the teacher should consider whether those words have other non-math meanings (think ‘times’ or ‘right’) and should lead the students in a discussion of the different meanings in order to preempt any potential confusion.
- If the math words are simply being reviewed, find creative times throughout the day to stick in review, such as during the morning message, in order to avoid taking up valuable math class time. If the words being reviewed are essential to the day’s lesson, they should be reviewed quickly at the start of the lesson (no more than 5 minutes) and left up visually as a reference.

Conclusion and Citation

Thinking about when and how to introduce math vocabulary will lead to students’ mastering and retaining the math words much quicker. The more strategic a teacher can be in teaching and reviewing math terms, the better.

Bay-Williams, J. & Livers, S. “Supporting Math Vocabulary Acquisition.” *Teaching Children Mathematics*, pp. 235-245 (2009). <http://bit.ly/xE9HAP> (free).