

DOINGWHATWORKS



Presentation

Building Vocabulary in Middle School Math Class

KIPP San Francisco Bay Academy, California • February 2009

Topic: Adolescent Literacy

Practice: Vocabulary Instruction

Highlights

- Seventh-grade math teacher Maureen Ferry describes how she helps students to develop their vocabulary in her consumer math class.
- Students maintain a math vocabulary journal, building their knowledge and facility to use new words.
- Students increase their command of math vocabulary by engaging with math games, completing a range of exercises to learn the words of the week, and taking assessments that require students to review and use key words.

About the Site

KIPP San Francisco Bay Academy

San Francisco, CA

Demographics

44% Hispanic

37% Black

11% Other

5% Asian

2% White

77% Free or Reduced-Price Lunch

21% English Language Learners

KIPP San Francisco Bay Academy takes an explicit instruction approach to literacy development. Distinctive features of the school include:

- A longer school day,
- Schoolwide use of a vocabulary journal in every class across all subject areas,
- Scaffolding reading comprehension using graphic organizers, and
- Maximal use of classroom time for learning using Do Now and Exit Ticket activities.

Full Transcript

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Welcome to Building Vocabulary in Middle School Math Class.

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My name is Maureen Ferry, and I am the seventh-grade math teacher at KIPP SF Bay Academy in San Francisco, California.

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At KIPP we are trying to make vocabulary instruction in math a schoolwide thing. By using the vocabulary journal across the school, across all math classes, and by teaching the students in fifth grade that vocabulary is an essential part of math, they're used to that. They understand it. And then, by the time to get to sixth grade/seventh grade, they're comfortable using their vocabulary journal, and their vocabulary is probably going to be much stronger.

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Every Monday I directly teach at least five words per week. I present a PowerPoint, and my students write their terms and descriptions and examples in a vocabulary journal. So students set up the vocabulary journal with a table of contents. They separate the main section by class, and then they also have an index. And so each class has its own table of contents where they just write the words, and then each class has a section.

For instance, all my students use just their math section in their vocabulary journal in my class, but they're using the same journal in all their other classes. And for every word, each student enters in a description of that word and then either an example or drawing of that word. And by the end of the week, I have my students enter a new insight. So something new they learned about that word throughout the week.

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To give you an example of a word that we used today, consumer, my definition was, "any person that purchases something for personal use or consumption, and a student's description that they shared in class was, "any person that buys something." I check for understanding of their vocabulary in class by engaging in discussions with students, with particular students, and by walking around and spot-checking their vocabulary journals. At the end of the week, I also assess my students on the vocabulary for that week, and at the end of every unit they have a unit vocabulary assessment.

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I want to give students the opportunity to engage in conversations around the words, and so I often give them opportunities to work together in pairs—to play games, to discuss the words, to share a sentence—for a couple of reasons. One, it gets them talking about the word. Two, often when they share a sentence or an answer with their partner and they check it with their partner, they're more likely to raise their hand and want to share it with the class. And then I also strategically call on students to share-out examples or sentences to check for understanding. I use a lot of vocabulary games in class, really to get my students talking about the vocabulary and using it in common language. I want to engage them in conversations around the vocabulary words.

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I think it's really important that students are practicing vocabulary in their homework, so I reinforce vocabulary on a daily basis with their homework assignments. In addition to their skills homework, whatever skill we are working on, they also have vocabulary. I don't want this vocabulary homework to be necessarily challenging to them, but I want them to be practicing with the words that they're learning. So every single Monday night students are doing a spelling activity with the words; they're called letter pyramids. Every Tuesday students are completing a cloze list. So they're filling in words into sentences that are part of their packet that they get every week. Every Wednesday my students create a crossword puzzle. So they write clues for the words; they set up the words on a crossword puzzle. Thursday they swap those, first thing in class, to get practice with the words, and Thursday for their homework they add a new insight to their vocabulary journal.

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To help my students to determine word meaning, I often use roots depending on the week's words. So for instance, when we had percents and we were doing a lot of percent conversions, I wanted my students to understand what the word percent really meant. So we broke it down. "What is cent?" Cent is "of 100." Think of other words that have the root cent. And so the students thought of "century." Students thought of cent out of the dollar. Breaking down the word percent help them better understand why you move the decimal two places to the left when you representing a percent as a decimal. It's always of 100 it's always in the hundredths place.

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Another strategy that students use in identifying word meaning is just using context clues. So I help my students break down a word problem, underlining important vocabulary words, circling numbers, and determining using the context clues—using the clues in the problem—what the word means.

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I provide my students with opportunities to use the new vocabulary words in their homework, in the games that we play in class, and then in cumulative reviews. So at the end of the unit, I'll continue to review the words from the entire unit. When we have a benchmark exam, I'll continue to review the words from the entire quarter, and so that way the words are continuously being integrated into the classroom.

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To learn more about building vocabulary, please explore the additional resources on the Doing What Works website.