

Name: Ellen Montgomery

Grade Level/Subject: 8th Algebra I

Topic: Cool Tools for Word Problems

Objectives (P.A.S.S.): 1.1a Translate word phrases and sentences into expressions and equations.

1.2a Simplify and evaluate linear expressions

1.1d Solve two-step and three-step problems using the concept of distance.

My specific objective is to introduce and use a verbal model of a real-life situation, and translate those words into mathematics.

The specific tools include the attached Verbal Model Example lab sheet

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Introduction:

Review previous day's vocab words from taxonomy: Variable
variable expression
values
evaluating the expression

Include words like the following: times (for multiplication)
quotient (for division)
sum (for addition)
difference (for subtraction)

Instructional process:

Introduce the word [verbalize]:

When we want to express ourselves, we [verbalize] our feelings; we say it.

Look at its root word-- [verbal]-- consisting of words. So [verbal model] means to put into a few words the relationships of the real-lifesituation . We then translate those words into mathematics

Our objective today is to put into a few words a lengthy word problem, and then translate those words into mathematics. As we do that, we can use a [verbal model].

*Pass out a Verbal Model Example Sheet to each student and go over it.

Have them divide into groups of two to work the word problems on the back.

Closure: I walked around the room, making sure they were understanding the principal of writing in words the initial situation.

Assessment: Assessment occurred as I walked around the room listening to them discuss and looking at their work, helping as needed. I did ask them to journal the next day, explaining what a verbal model was, in their own words.

Modifications/Accommodations: I was careful to put students together so that the ones most likely to understand would be of help to those who might struggle. This particular class was quite sharp, so only one example was necessary. I have included an extra example sheet for those students who need another example.

Reflection: My initial lesson plan included an analysis of the units at the same time that I introduced verbal models. This seemed to be too much for them to absorb at one time so I have already eliminated that aspect of this lesson plan.

Other comments.

This model comes out of the McDougal Littell Algebra I textbook. Initially, I was not particularly impressed with it because the students seemed to have trouble. But as I have continued to present it, and require the students to use it, the model has proven to be of benefit. They seem to want to come up with an answer first; then go back and write the verbal model. By beginning with a word problem that uses a known formula, the students appeared to understand its use a little more. My experience has been, that the more they use it, the more they are actually able to utilize it on more difficult problems.