

I'm Still Not Sure

Brad Volkman's students can mark at the bottom of their daily quiz, "I'm still not too sure." See how Brad helps these students in the **Going Beyond** folder for Chapter 22 at EffectiveTeaching.com.

Brad Volkman is the principal of a high school in Alberta, Canada. In addition, he chooses to teach one section of mathematics. In the school year, 2008–2009, his Math 14 class had 27 students with more than one-third coded for various special needs. He loves this challenge as well as serving as a role model for his staff.

His lesson plan provides four directives and accompanying questions:

1. Objective (What exactly are my students to learn today?)
2. Lesson Plan (How exactly am I going to help them learn it?)
3. Assessment for Learning (How exactly am I going to know if they learned it?)
4. Homework Assignment (What practice and reinforcement do I provide prior to the next day's quiz?)

In the daily quizzes that he gives, he does not grade his students. Rather, he uses his daily quizzes to

1. assess his own effectiveness in helping his students to learn, and
2. provide a tool for the students to assess their own learning.

To allow his students to assess their own learning, he poses the following statement at the bottom of the quiz:

Please check one of the following after we mark the quiz together:

_____ I can do this.

_____ I'm still not too sure about this.

Brad says that at first his students are either shocked or suspicious of responding to the statements. They all expected to be marked or graded. Instead, he asks them to assess their own learning. If they mark "still not too sure," they realize he will not mark them down.

Rather, they realize how much he cares whether they have learned, and if they haven't they understand that he is there to help.

Here are examples of his lesson plan, teaching notes, and quiz.

Unit: Patterns & Relations: Outcome 7

Date: Friday, Oct. 19

Upon Entering the Classroom

1. Students hand in homework (or pink-slip) and begin quiz.

Homework to hand in: p. 222 #8 and 9

Quiz #23 One-Step Equations: Problem Solving

2. Take attendance, mark homework for completion only, record and hand back to students. (10 min.)
3. Mark quiz together with class. Students mark their own and indicate their understanding. (15 min.)

Go over the quiz in great detail. Engage students by asking them for their answers and where students differ in opinion, have them justify their answers. Ask for input from as many students as possible (formative assessment).

4. Students hand in quiz and take a break while quiz results are quickly recorded and returned. (5 min.)

Do not record a grade. Rather, record in "marks book" if they checked off that they understand the quiz solutions or if they are still not too sure. Students who checked off they are still not too sure need to be met with before the end of class or the day for some one-on-one or small-group help.

5. Regain student focus and teach new lesson for the day.

Lesson Begins

- I. Objective (**What exactly** are my students to learn today?):
(Possible attention-grabber or verbal pre-test challenge, title on board)

Get class attention by asking them to use their skills from today's quiz to try and solve a problem that requires more than just one step: "During a trip to the grocery store, Brian bought 2 dozen eggs and a liter of milk. The total bill came to \$3.87. If a liter of milk costs \$1.49, what was the price of one dozen eggs?"

If they cannot solve it algebraically, ask them to solve it using pictures or any other method that might work.

After allowing them to struggle with this, tell them: By the end of today's class, you will be able to solve problems algebraically that require creating and solving 2-step equations.

- II. Lesson Plan (**How exactly** am I going to help them learn it?):
(Notes, examples, discussion, manipulatives, and guided practice)

Show several examples from pp. 234 – 238 of text book, beginning with the one above. Engage students in the process, asking them to provide input and ask questions. Look for any patterns of error or confusion.

- III. Assessment for Learning (**How exactly** am I going to know if they have learned it?):
(Independent practice, discussion, quiz next day)

Assign p. 237 #5 as independent practice. Circulate around the room and give help where needed. After students have completed the question, go over it together as a class showing them exactly how a correct solution will need to look in order to receive full marks on an exam. Repeat the above process for #6 on the same page.

For tomorrow's class use Quiz #25: Two-Step Equations: Problem Solving as a way for checking understanding.

- IV. Homework Assignment (Practice and reinforcement prior to next day's quiz):
(a couple of questions from the text book—not too much)

In preparation for tomorrow's quiz on this topic, practice the skill by completing p. 238 #8 and #9.

Quiz #23
One-Step Equations: Problem Solving

Problem 1: Jill had some CDs in a case. After Jay gave her 7 more, she had 12 CDs in all. How many CDs were in the case to begin with?

1. Define the variable:
2. Write the equation:
3. Solve the equation:
4. Answer the problem:

Problem 2: The cost of a cell phone is \$165.79. Mark makes \$7.95 per hour at his job. How many hours of work will Mark need to do in order to pay for the phone?

5. Define the variable:
6. Write the equation:
7. Solve the equation:
8. Answer the problem:

Name: _____

Please check one of the following **after we mark the quiz together**:

_____ I can do this.

_____ I'm still not too sure about this.

Quiz #25
Two-Step Equations: Problem Solving

Problem 1: The volleyball team stopped for supper on their way home from a game. They ordered 10 milkshakes and several hamburgers. The hamburgers cost \$31.60. The total bill for the hamburgers and milkshakes together was \$54.10. How much did each milkshake cost?

1. Define the variable:
2. Write the equation:
3. Solve the equation:
4. Answer the problem:
5. How do you know that your answer is the correct solution?

Problem 2: On Derek's recent visit to Safeway, he spent half his money on junk food. He also spent \$19.95 on a DVD. After paying, he had \$5.05 left. How much money did he start with?

6. Define the variable:
7. Write the equation:
8. Solve the equation:
9. Answer the problem:
10. How do you know that your answer is the correct solution?

Name: _____

Please check one of the following **after we mark the quiz together**:

_____ I can do this.

_____ I'm still not too sure about this.