

One of the primary reasons that students do not do well on the New Mexico Standards-Based Assessment (NMSBA) is because they have trouble responding in writing to a question or prompt that asks them to discuss, elaborate, or describe the process they went through to solve the problem or make a decision. Multiple researchers advocate providing a structured way for students to respond to problems and provide solutions. The research for this structure includes work done by Marzano and Reeves in their work to improve student performance, and in the body of work surrounding students who come from poverty. The four-square activity is a synthesis of this fascinating work. While the full academic year is really optimal, teachers could begin now to use this strategy.

There are only a few basic parts to this strategy:

Once a lesson has been taught, or a concept introduced, students should be asked to fold a piece of paper into four equal parts. It does not matter if the paper is folded so that it has four length-wise pieces, or whether it has two portions on the top and two on the bottom.

Next students should label each part of the folded paper as follows:

Part 1: Write the problem (in math: write the number sentence; in reading/language arts, science or social studies: write the problem or hypothesis).

Part 2: Provide the solution (in math; answer the number sentence; in reading/language arts, science or social studies: provide the solution)

Part 3: Draw a picture of the problem and its solution

Part 4: Use words to describe the process used in parts 1, 2 and 3. Here students should discuss, elaborate, or describe the process they went through to solve the problem or make a decision.

When first using this strategy, many teachers have found that it is easier to get students to draw the picture first. While some students might not have language to explain solutions and procedures, sometimes they intuitively know how to solve the problem and can draw the picture and work from there. Sometimes teachers are concerned that not every child starts with box 1 and proceeds to box 2, etc. The beauty of the four-square activity is that students may start in any part of the four-squares and work through the problem to the end in a process that students understand individually.

The first time this is used with students, teachers usually do not see a great deal of successful results. Often times students are not used to doing this type of work in any other class other than reading/language arts. The key here is to persevere. There is a principal in New Mexico that swears by this strategy. Following her first year as principal, she was asked how it was that the school, which had been a school in need of improvement for several years, made AYP. She answered that the only thing she did differently was that she insisted all teachers use the four-square activity at least one time each day in more than one subject.

Four Square Activity

1. Have student divide papers into four quadrants.
2. In the first quadrant students are to write the number sentence for math and the problem or question for other subjects.
3. In the second quadrant students are to provide the solution for math or for the other subjects.
4. In the third quadrant, students are to draw a picture of the problem any way they would like.
5. In fourth quadrant students are to write about the solution, how they got the solution and generally explain the process they used to get to the solution.
6. This process needs to be used constantly to train students in this method of problem solving and communication.
7. One school district in NM attributes this process to the making of AYP. Teachers and Students were trained in this method of communication and problem solving and used it on the CRT.
8. This process was adapted from numerous authors including Payne and Marzano.

Student Name:

Four Square Worksheet

1. Write the number sentence or problem.

2. Solve the problem/provide a solution.

3. Draw a picture of the problem and solution.

4. Describe the problem in words and describe the process you used to get the solution.