Teachers’ Letter Essay, Research Paper

September 29, 2000

Ms. Jessica Leanne Moore

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Dear Leanne:

I read an article and thought it would be of interest to you. I thought the information provided could be useful to use for the junior high students in our math classes.

I researched standards in the Principles and Standards for School Mathematics and saw that, according to these standards, the grade band for the type of math problem discussed in the article would best fit for grades sixth through eighth. The curriculum standard covers dealing with using problem solving skills that can be used with a bar graph. The exercise problem would get the students to consider the possible solutions and different ways in which to approach the situation at hand. The math problem would require students to explain and reflect on their approach in solving the problem. The students should reflect on their approach and decide how they would be able to explain their reasoning clearly and to understand the process of their problem solving. A teacher?s role in this type of math problem is to allow the students to be challenged by having more than one answer to the problem. Also, the teacher can motivate the students to seek a complete solution instead of giving up. Clearly, I noticed that the focus area for this math problem is problem solving.

Also, according to the Mississippi Mathematics Framework 2000, the content and process strands that this problem best fits are thinking about and dealing with problem solving and reasoning. Grade level 7 would be the best level in which to use the math problem. The competency that this problem best deals with is to collect, organize and summarize data and to use simple probability. I found this information on the internet using this web site: http://www.mde.k12.ms.us/acad/id/math/mathframe.htm.

The math problem that this article discussed was how 5th and 7th grade students were asked to solve a one-half problem. The students needed to figure out how many days it would take a radio station to give away 1242 tickets if they were to give away half of the tickets each day. After the first day, 621 tickets remained. Then the station gave away half of the 621 tickets. They followed this process until there was only one ticket left. One student approached the problem by creating a bar graph and assigning one bar for each day that tickets were given away. Some students encountered difficulties when, after halving a number, they were left with a remainder. One student decided to round an even number that had a remainder down so it could then be divided by two evenly. And the student rounded odd numbers up to make it an even number.

I saw an exercise in the text book MATHMATTERS Book 1 which dealt with blue jean sales over the course of a week. In the exercise, some questions were asked which involved using a bar graph that could be used in conjunction with the math problem discussed in the article I read. Some questions which could be incorporated with the article?s math problem involved telling the day which had the lowest number of sales, how many blue jeans were sold on certain days, and how many more blue jeans were sold on one day compared with another.

I do feel the math problem I have encountered would be useful to use in our classrooms and think it is very engaging. Students from several different grades would be able to solve the problem. Some of the students which were cited in the article thought that when they had a remainder left over, the problem was solved. That was not so, therefore, the students needed to understand how to proceed to the next step until the problem was truly solved. I believe that the thinking which is involved in order to understand the problem would help them get experience with how to deal with the situation of what to do when they felt they could not go any further in the problem.

If you would care to read the article yourself, I have included the citation for your convenience.

Responses To The ?How Many Times Can You Take One-Half?? Problem. Teaching Children Mathematics. (May 1999). 534-536.

Sincerely,

Debbie Campbell

Bibliography

Responses To The ?How Many Times Can You Take One-Half?? Problem. Teaching Children Mathematics. (May 1999). 534-536