Anne Hamann Mary Ann Johnson

Helping Student Motivate Themselves ED448F

Assignment #13B 400 Level

Lesson plan:

Subject: 7th Grade Math

Topic: Surface Area

Procedure:

**Class starter:** on board will be two rectangles, with lengths and the directions to find the area, there will also me a note “remember your ruler” (they would have been told the previous day that they would be needing their ruler)

Students will be given a few minutes to complete these while taking attendance etc.

**Lesson:**

1. Review the problems from class starter and any issue with previous days’ lesson.
2. Show a rectangular prism (such as a Kleenex box) and discuss what classifies as a rectangular prism.
3. Ask: Think about situations when it might be necessary to find the total area of a rectangular prism. Write down a couple that come to mind and be prepared to share with your partner. Give students a few minutes then pair-share. Follow this with making a class list on the Promethean board and students listing at least 3, either of their own or “borrowed”.
4. Before getting to the lesson we will have a brief review on how to measure lengths with a ruler and explain for today’s activity they will be measuring in centimeters, going to the tenth place. This will be practiced before moving on.
5. I have a collection of about 15 different rectangular prisms of all different sizes. Each has a letter on it. Give each student the handout (which has a list of the letters that correspond to those on the boxes along with work space for formulas/calculations. Explain that each group will get a box and students should work together to calculate the total surface area of the prisms. Remind students they must show work/calculations. Before starting explain that after they finish the box will be handed to the partners next to them. If a group is waiting for the people next to finish they may just get a different box from the collection on the front table. The last group will take the box they are finished with to the front of the room. The final direction is that as they finish they will check in with me to see if they have the correct answer. They also will be told that they need to alternate which partner is checking in with me.
6. I will let the students work on this for about fifteen minutes to ensure they have all had time to measure several different boxes.
7. Students will be directed to the front of the room and will discuss what they noticed while doing this activity. They are asked to state: I noticed that……

What students will usually come up with is that there are actually three sets of equations that correspond with the six sides of each rectangular prism.

I will pose the question and ask to give me a “show of fingers” for the answer: How many measurements did you have to make? I will expect to get anywhere from 3 to 6. We then discuss the “pairs” of sides that exist and how using this simplifies their measuring and work.

I will present to them that they can write 3 equations each one starting out:

2x \_\_\_x\_\_\_=

One more piece of instruction that I will wait until this point to give, as to not overwhelm them, is that each answer should end with cm squared.

1. I like to give them about 5 more minutes to do a couple more prisms using the above information.

The following day’s class starter will be a rectangular prism, with measurements, drawn on the Promethean board with the directions to find the total surface area of the figure.

This is usually a quick lesson to transfer what they did with the manipulatives to doing on paper.

I will use the same steps for teach how to find the surface area of cylinders.