Reflection 3rd grade public research lesson on May 19, 2005 at the St. Josaphat School

In planning the lesson on equivalent fractions using beads, there were several concepts that we felt would encourage learning among students. Our team believed that the necklaces would encourage excitement among the children. Students in the class had previously shared necklaces that they had designed at home and they were a big hit. There was concern as to whether the boys would take to the idea, but they were intrigued by the idea of producing something that could be sold. The bead necklaces lended themselves well to the lesson. The students could identify and form the fractions based on their necklaces. With further development of the lesson, equivalent fraction would be identified.

During the lesson observation and the debriefing session certain parts of the lesson were repeatedly stressed as areas for possible revision and improvement.

These areas were:

How can we ensure that students do not miss out on the main goal of the lesson?
Is there a way to enhance the use of the manipulative so students gain a greater understanding of the lesson?
Do the students understand that the fraction is part of the whole and part of a set?
Was the goal of the lesson met?

Seeing Equivalent Fractions

Had the session continued past the 50-minuite-time period, students would have a very brief introduction to equivalent fractions, but would not have grasped the concept as hoped. By having a board layout included in the lesson plan, we could ensure that the enlarged versions of the necklaces were put up in a manner for students to easily see the equivalent fraction. It would also be necessary to put all of the ½ fraction in one place and the ¼ fractions together so students could see patterns among the equivalent fractions.

We also believe that if students worked in pairs rather than groups of four, there would be more variations, but also more overlap in the appearance of the necklaces. This would provide further opportunity for students to view equivalence among the necklaces and beads.

Enhancing the Manipulative

The idea of having necklaces the same length lends itself nicely to seeing equivalent fractions, however the environment needs to be more controlled. Our hope was to see similarities in patters between 28 and 48 beads. Ideally, the necklaces would look exactly the same, but consist of differing fractions. Choosing 28 and 48 had a downside. The beads were quite small and difficult for a third grader to work with. In the future, I would choose larger beads. In addition, the numbers 28 and 48 were difficult for a third grader to work with since they spent so much time counting and recounting for accuracy. I feel that the goals of this lesson could be met using smaller numbers such as 12 and 24. In teaching the lesson again, it would be better to allow students time to figure out how many beads to use on their necklace before they have the beads in front of them. Many students were distracted and caught up in counting the beads with out knowing how many mad up the fraction.

Part of a Whole vs. Part of a Set

The bead necklaces were chosen specifically for the reason that they could be seen as part of a whole and part of a set. Ideally, we hoped that the students would lay all blue, then all red, and then all purple. As they continued designing their necklaces, they would create patterns, which made up different fractions within each necklace. This did not happen during the teaching of the lesson. A possible idea for seeing equivalence would be to change the length of the necklace rather than the number of beads, perhaps a necklace and a bracelet. This would still show ½, ¼, and ¼, only the length would change.

Goal of the Lesson

The lesson by itself did not meet the goals that it set out to accomplish. Students were able to recognize the fraction of their necklace that was equivalent to ½ and ¼, however, the planning team had hoped that students would see patterns among the fractions and among the numerator and denominator. I see great potential in the lesson and with the above changes the students would be able to see equivalence, it just needed to go a little bit farther.

One variation to the lesson would be to give out the exact number of beads needed to make the necklaces and let the students figure out the fractions on their own.