Third Grade Math, Orrington School, Evanston

When 3rd graders arrive at school in the morning, they know to come in and check the flip chart for a math question. They write their response in the their Math Journal. A question might say, "How can we measure time without clocks?" It might be concrete: "Leah brought 17 pencils to class and Dess sharpened 12 of them. How many still need to be sharpened?" Questions might be designed to prompt discussion, guage students' math sense, or for other mathematical purposes. Getting students to think about and write about Math and mathematical reasoning, and integrating Math with writing and literacy, is the goal.

The Math curriculum at my current school is Everyday Math, which provides a circular, overlapping curriculum with many opportunities to return to previously introduced skills and concepts. I start the Math block with Math Games. Students play games (from the Student Reference Book) for about 15 minutes before we move into the day's lesson. We start with a Math warm-up (Mental Math and Reflexes) and a Math Message. Students solve the problems and we discuss them as a class.

Following is a typical Math lesson taught to a 3rd grade class.

Exploring Perimeter and Polygons

Objective: Students will make, name, and compare shapes and describe their similarities and differences.

Materials: Straws and twist-ties; Math Notebook; Student Reference Book; Math Journal

Activities: Students will work in groups of 3 or 4 to construct straw shapes. They will not take shapes apart once they are made. Display instructions for making shapes and writing about them on document camera (#1-4).

1. Make a triangle out of straws, then use three different straws to make a second triangle. Answer in your Math Notebook: How are your two triangles alike? How are they different? Discuss with your group. Each group will share answers with the class. Save your two triangles.
2. Make a square. Change your square a little by pulling one pair of opposite corners in opposite directions. Answer in your Math Notebook: Which shape did you get? How is this new shape like the square it was made from? How are the shapes different? Discuss with your group. Each group will share answers with the class. Save your square.
3. Make a rectangle. Change the rectangle a little by pulling one pair of opposite corners in opposite directions. Write in you Math Notebook: Which shape did you get? How is this shape like the rectangle you made it from? How are the shapes different? Discuss answers with your group. Each group will share answers with the class. Change the shape back into a rectangle. Save your rectangle.
4. Make a trapezoid, a 4-sided shape with one pair of parallel lines. Write in your Math Notebook: How is your trapezoid the same as your rectangle? How is your trapezoid

different from your rectangle? Discuss with your group. Each group will share answers with the class. Save your trapezoid.

After completing this part of the lesson, we will read a selection about perimeter (Student Reference Book pp.150-151). Students will complete the following (I will put instructions on document camera as we do the steps together):

1. Work together with your group to use the inch side of the tape measure to find the distance around your straw triangle. Discuss strategies.
2. Change your rectangle back into a parallelogram. Measure the distance around.
3. Is the distance around the parallelogram the same as the distance around the rectangle?
4. Record the perimeters of your rectangle and paarallelogram at the top of Math Journal page 63.
5. Undo one corner of your parallelogram, unfold the sides, and measure the total length of the connected straws.
6. Is the total length about the same as the distance around?
7. Measure the perimeters of the other shapes you made and record them in the table for Problem 2, page 63. Finish all of Math Journal page 63.
8. When you are done, take your polygons apart and place straws and twist-ties in the correct boxes.

Outcome: Children will gain experience making, naming, and comparing shapes. They will discuss perimeter, area, angles, and parallel lines.