

A TEACHER REFLECTS



I decided to connect the work of this unit with an examination of tessellations. I was able to connect it with some previous work from their art class. We explored the work of M.C. Escher, with whom students were really intrigued. I asked students to analyze his work—to explain what was done. Students tried tracing the shape, then coloring it and adding details as in the original. I found a book that explained his work and included some exercises for drawing.

I brought the kids to the computer lab and introduced them to TesselMania. Using this program, students could easily see the meaning of terms such as *flip* or *slide*. Also, the students could see the tessellation being formed and could not do it incorrectly since the program would not let them. From the students' point of view, the best part was being able to add color and fill in details with stamps or another tool. They could also watch their tessellation being formed over and over again. Students also liked choosing the sample tessellations and watching how they were formed. Creating a number of tessellations quickly through the use of the computer seemed to give most students a better understanding of the mathematics involved in the tessellation. I had them each print one, and we posted these, again looking for patterns in the shapes that tessellated.

At this point, I had them work with the polygons in the book. They were enjoying their experimentation as they diligently worked to get all the polygons to tessellate and seemed somehow dis-

appointed when they found one that didn't. I wondered, however, if this excitement would hold long enough to get them motivated to think deeply enough to understand what is necessary for a tessellation. I hinted rather broadly and pointed out that we had already discussed the reasoning behind triangle tessellations. I reminded them about the other topics we had covered during this phase, including measuring the angles and knowing the sum of the angles of various polygons. Small groups of students huddled together and came up with various solutions until they came up with the one that worked.

I realize that at this level it is really not necessary for students to understand the more complicated aspects of tessellations, but this class was interested and seemed to have the mathematical background to grasp the concept. Mastering this complex idea did much to bolster their confidence for future challenges.