A TEACHER REFLECTS

Phase Three allowed students to bring together and refine the major skills of the unit—making graphs and solving distance, time, and speed problems. Lesson 9 also allowed extra practice with interpreting the physical meaning of graphs and developing the idea of average speed. Some of my students wrote sports commentaries that were too brief and undetailed for their partners to use to construct graphs. I think next time I do the activity I will have students write their commentaries one day, mark their papers, and return them the next day for their partners to graph.

I found that my students needed to be told that they could put the robot's graph on the same axes as Antonio's in Lesson 9. Some were stuck on the idea that separate problems require separate responses. Some kids took a while to understand the concept of average speeds. They had trouble grasping that when there are several speeds, one cannot divide time by the total number of speeds.

In Lesson 10, I had the students trace their graphs from the student book. We read the story, as a whole class, one sentence at a time. After each sentence we looked at all four graphs before reading further. Interestingly, my students figured out what Graph D represented before I did!

Revisiting the distance formula and its algebraic rearrangements in the first part of Lesson 11 really seemed to clinch it for my students and helped get them ready for the rest of the lesson. I used the second page of Lesson 11 as an exam. I allowed the students to work together to interpret the graph, but then had each student turn in his or her own work.

I assigned the final project over a week before it was due and allowed students a great deal of room for creativity and individuality in their presentations. Several of my students opted to present their projects orally to the class and submit their notes to me rather than a more formal written presentation. Several students actually prepared multimedia presentations, which made an impressive demonstration in class. I made sure that students knew in advance that I would be grading their presentations not only on accuracy but thoroughness as well. I felt it was critical that they demonstrate a knowledge of how to collect data to graph, how to make the three kinds of distance-time graphs we studied, how to write narratives that interpret graphs, how to use the distance formula and its algebraic rearrangements, and how to interpret slope and work with the concepts of instantaneous and average speed.