

## A TEACHER REFLECTS



Since most of my students were feeling pretty confident about spreadsheets and their ability to use them on the computer, more of their questions in this phase were related to graphs. We talked about the in-between points on the graph because most of the students had a difficult time understanding this. I think it was because most of the graphing they had done in the past had been where they had connected the dots. So I decided to throw in a little discussion of discrete mathematics, which is really what this was, to show the difference between discrete and continuous relationships. I hoped this would help students learn how to *know* when to connect the dots. Here are some of the examples I gave the class:

Continuous	Discrete
snake crawling	rabbit hopping
dimmer light switch	on/off light switch
rolling a ball	bouncing a ball
running water	ice cubes

I pointed out that in Lesson 7, connecting the points indicates that there are fractions of people in-between. We had a lively and humorous discussion about this, as we laughed about having “ $\frac{1}{3}$  of a person,” but in the end I felt like students came away with a greater understanding of *why* we asked them not to connect the dots. This felt much better than simply telling them not to connect the dots.

The idea of graphs without numbers was new to my students. They wanted exact numbers. We brainstormed as a class other examples of graphs without numbers. Ideas students had were graphing test scores as high, medium, and low; graphing population growth as fast, moderate, and slow; and graphing the number of students who played sports as many, some, and none. Once they seemed to get over this “psychological” barrier, they were much more comfortable with the idea.

When students shared their posters at the end of this phase, it was obvious to me that they not only understood how to create graphs to show income, expenses, and profit, but that they had clearly learned much about the relationships between profit, income, and expenses. Some of the parents were stopping by to comment on what their children were doing with this unit. “I’m glad to see the realism and the concept of profit/loss being investigated.” “This is what I do in my business and to be able to help my daughter understand what she is doing is great.”