



TAKE IT TO THE MAT

A NEWSLETTER ADDRESSING THE FINER POINTS OF MATHEMATICS INSTRUCTION



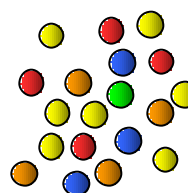
Southern Nevada Regional Professional Development Program
January 2003 — Elementary School Edition

rpd.ccscd.net

With this issue of *Take It to the MAT*, the Regional Professional Development Program begins its fourth year of providing teachers with a periodical addressing mathematics instruction. We hope you find the topics interesting and useful. —Eds.

The world in which our students live is increasingly data-driven. It is because of this fact that they need quantitative literacy. Students need the ability to collect, organize, display, interpret, and draw conclusions from data.

One type of data organization students may use is a tally chart. Imagine a student taking colored candies from a bag, recording each candy's color as it is selected. The resulting chart may look like the one shown at right. From this, the student may answer the following questions.



Color	Tally
Red	////
Green	/
Blue	///
Orange	////
Yellow	####

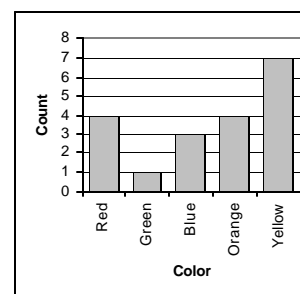
- Which color do I have the most of? the least of?
- Was any color clearly more numerous than others? less numerous?
- Which two colors combined equal the same as orange?

Even better, ask the students, “What questions could *you* ask about the data as you look at the graph? What are you wondering about?”

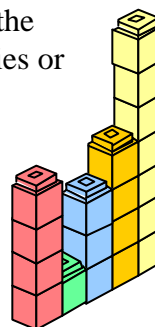
Adding a “count” column can extend a tally chart. If the number of tallies is large, the chart is easier to read when numerals are used to describe quantities. See the augmented tally chart at right.

Color	Tally	Count
Red	////	4
Green	/	1
Blue	///	3
Orange	////	4
Yellow	####	7

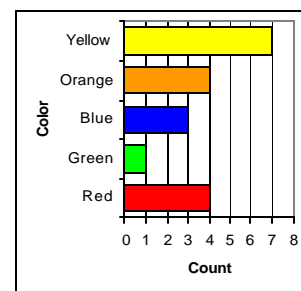
Tally charts are nice; they cannot be the sole method of data presentation. A bar graph is the logical step after creating a tally chart. It provides a quick, visual display of the data. Whether the bars are vertical or horizontal, the aforementioned questions about the data can be answered immediately, without recounting tallies or scanning through the counts.



Tactile students could create a “hands-on” bar graph of colored cubes.



Students may wish to color the bars the same color as the candies. In this situation, color may add to the visual impact and aid in interpreting the data. However, *caution is urged when using color in graphs*. If the addition of color does not add to the information presented and/or may be distracting, its use should be avoided.



In upcoming issues, we will discuss more of what one can and can't do with a bar graph, common errors that are made, and other members of the bar graph family.