

Using Technology in the Elementary Classroom

By Marilyn Western

Using Basic Software to Enhance Elementary Math

No matter what word processing, spreadsheet, or slideshow software you have on your computers, you have some great tools to enhance your classroom math activities.

Look what you can do with your word processing software! Collect a list of Math terms that students should be familiar with. Assign one word to each student in your class. Help individuals create a page which contains the word, definition, and either an example of the word or an illustration. Put a nice border on the page, include the student's name, and print. Assemble all pages alphabetically into a classroom **Math Glossary** which will get a lot of use over the year.

Want to know if students know what they think they know? Have them type out **step by step directions** for a Math process, such as adding two digit numbers, or using a number line, or how to give change for a 37 cent item. This will make kids stop and think about what and why and how they do things, and give you a clue as to how they are thinking. Younger students can dictate their directions; older students can use number bullets. Illustrate with drawings or digital pictures. This would also make a good addition to student portfolios to show how they expand their math knowledge over time.

Have you thought about using **callouts** to enliven problem solving? Take a digital picture of two students facing each other & pretending they are talking to each other. Students can insert these pictures into a document, and then add two callouts (those word balloons that you see in cartoons) by clicking on Autosshapes on the Drawing toolbar and selecting Callouts. Click and drag a callout over the heads of each of the students in the image. Students can type in a word problem in the first callout (the one on the left) and the solution in the second callout. Print and post! If you are brave enough, add a third student with directions for solving the problem in his/her callout. Now, that's really 'getting into' Math!

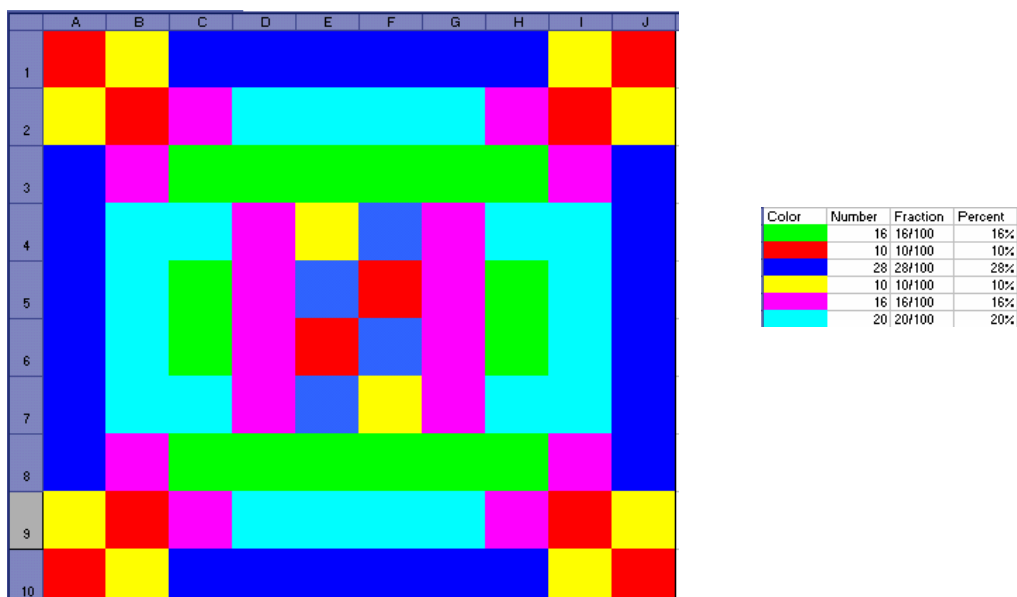
You know students will feel successful when applying technology to Math, so take advantage. Just before parent teacher conferences, have students select a math concept that they feel they really know well. Let their imaginations soar as they design their own **I Know How to Do This Award**. You can offer suggestions for the wording, but let them explore fonts and font sizes, add a cool border, and print. Now that's something that they can be proud of!

Spreadsheet software and Math are pretty synonymous, but elementary teachers often assume only higher grades are able to understand and use it. Au contraire! Check out Kathy Adkins' site *To Excel in the Classroom* at <http://www.forsyth.k12.ga.us/kadkins/spreadsheet.htm>. She has wonderful examples and templates for **interactive charts** to use with K-5 students. Lower el teachers can find step by step directions to create charts for their students. As students fill in the charts with their own data, they will watch with amazement as the graph changes. Kathy even helps out by giving a link to a page with over 200 daily math 'survey' questions for K-2 classes. Older students can use the step by step directions to build their own graphs and charts. What a goldmine!

Once you show students how easy it is to organize data they've collected and present it in chart or graph form, extend their experiences with a discussion of **mean, median, mode, and range**. Instead of assigning workbook pages to practice identifying these numbers, have small groups of students collect data (for example, classroom shoe sizes or student heights) and create a bar or line graph. Display these on several computers and have students fill in a worksheet table with the mean, median, mode, and range of each graph. There's something motivating about using personalized data!

Have students see the relationship between fractions, decimals, and percentages with a creative little project called **Percentage Picture** from *The Buddy Project* found at <http://www.buddyproject.org/capers>. Students can outline a 10x10 block of Excel worksheet cells (see who is the first to notice this makes a block of 100). Now comes the fun part – students can use the Fill tool to create a pattern or simple picture. Once all the cells in the block are filled, students can create a list of the colors used in the cell. Now comes the interesting

part. Label the 2nd column of this list Number, the 3rd column is Fraction, and the 4th column is Percent. Students fill in the 2nd column by counting how many of each color. These numbers should add up to 100 – the total number of cells in the block. Translate these numbers into fractions in the 3rd column (17/100). Calculate the percentages (17/100 = 17%) for the 4th column. For an extra challenge, try using a block of 10x20 or 20x20 cells.



I'm sure most of us have used PowerPoint for slideshows, but consider inviting students to use a single slide as a **poster** to illustrate a Math concept. With the cool background templates, the ease of WordArt and the simplicity of the Drawing toolbar for drawing shapes, arrows, stars and freeform lines, you have all the makings of some eye-catching poster possibilities. Buddy up students to poster-ize concepts such as how to determine the area of a circle, double digit addition rules, or defining and illustrating geometric shapes. Leave it to the imaginations of your students and you won't lack for room décor!

Of course, with your Internet access, you have some stellar resources. Locate, bookmark, and feature online data sources for problem solving or graphing, such as the **2000 Census** data at <http://factfinder.census.gov/home/en/kids/kids.html> or **World Climate** info at <http://www.worldclimate.com/>. There are also interactive java pages that you really must put on your list of places to take kids. Check out the *Interactive Math Tools* at the **NCTM's Illuminations** web site <http://illuminations.nctm.org/mathlets/index.html> or **The National Library of Virtual Manipulatives for Interactive Mathematics** at <http://matti.usu.edu/nlvm/nav/vlibrary.html>. Both sites feature virtual manipulatives based on the NCTM standards for PreK-12. No need to tell your kids how fun this is – they'll get that concept immediately!

As you can see, you don't need specialized software to enhance your Math curriculum. With a little ingenuity and access to a couple of computers, you can extend your Math studies with pizzazz!

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