# DON'T FORGET CRISS PHILOSOPHY!

If you are not using technology in your classroom, you need to. If you are, don't forget to use the CRISS philosophy. In most cases you will be using the technology as a means to a task end. As always:

1. Build on what the students already know, their *background knowledge*, and *set purposes* for the activity.

2. Insure kids are *actively involved*. They love technology, but are they paying attention to the task or just playing with the technology?

3. The issue in #2 screams for *metacognition*. Your students need to continually check their understanding -- Are they on task? Are they using the technology properly? Are they getting solutions? Are they checking their solutions?

4. Make sure the students are *writing* about and *discussing* the new ideas, processes, and solutions derived from the technology.

5. Students need to *organize* the information they have learned into a logical format, so they can study, learn, and use it.

I once visited a high school math class where the teacher was working with his students using a graphing calculator. The lesson consisted of the students plugging in an equation provided by the teacher and then working with it and the resulting graphs. The teacher first changed various numbers in the equation from positive to negative and from whole numbers to fractions, then he added and subtracted other numbers. Students were definitely "actively" involved, and yet I wondered how much would be retained.

How much more effective the lesson would have been, if the teacher had started with a prediction activity where teams of students discussed and wrote down how they thought the graphs would change as the numbers were manipulated. Next, the groups could experiment and test their hypotheses. If ever their predictions were wrong, they would have to figure out why they thought the graph would change as they had predicted and why the actual change was different. Finally, the groups could try to establish some rules for the changes they observed. They would need to test those rules with additional experiments on the calculator and revise them as needed. In the future, when the students encountered different types of equations, they could refer to these early conclusions and see if the same rules applied to the more sophisticated equations. If not, they could add to or revise their earlier conclusions.

It is sometimes an easy "cop out" to classify our teaching as *hands on* or *activity based*, so we don't really need to use CRISS. I beg to differ. If we want our students to learn and remember, no matter what the content, the processes inherent in the CRISS philosophy must be used.