Parent Involvement and Awareness:
Choosing the Best Mathematics Tool for the Job at Hand

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Sometimes we make mathematics in school too easy for students. Yes, I did say TOO EASY. We frequently tell students exactly which mathematics tool or skill to use on each and every mathematics problem rather than letting them make that important decision. While this may be the most direct means to teach students the use of a mathematical tool or skill, it is not the most realistic teaching strategy in the long run. Eventually all students will leave school and face the mathematics problems that career, family, and life throw at them. At that point, when it counts the most, there will not be a teacher standing at their shoulder saying, "Use long division." Or "Use a calculator here."

We need to teach our students not only HOW to use a mathematics tool or skill, we need to teach them WHEN to use the right tool. Without a doubt, certain tools are better suited to different mathematical tasks. This is a useful lesson for parents and guardians as well. They often assume that if a student has acquired all the skills of paper and pencil computation, then they are set to take on life. We know that students must also be proficient in the use of estimation, mental mathematics, the calculator, and computers—in addition to paper and pencil computation.

The vast majority of problems we face in our day-to-day lives can be solved by one or more of these four tools: pencil and paper, calculator, estimation, or mental math. Students and adults must not only be proficient in each skill, but knowledgeable about what tool is best to use in any given mathematical situation. "*Choosing the Best Mathematics Tool.*" is an activity that is useful for this purpose with both student and parent groups.

~ Activity handout on next page ~

Here is how to use this activity with either students or adults:

1. Form groups of two to four people and give each person a copy of the handout.

2. Challenge each group to discuss one problem at a time and reach a consensus about the best tool for that particular mathematics problem. Remind them that a consensus is when most people agree.

3. Ask them to use one of the sheets to mark the tool they agreed upon. In addition, ask them to talk about WHY people chose the tool they did.

4. Allow enough time for the groups to discuss each of the four mathematics problems.

5. When the groups are done with the task, gather the whole group together and ask for a show of hands of the "best" tool for one problem at a time.

6. After each vote, using an overhead transparency of the Handout, mark down the consensus tool of the group for each problem.

7. Then ask someone to explain to the whole group why he or she chose that tool. If there was not total agreement, ask another person to explain why he/she chose the tool he/she did, instead of the consensus tool.

8. Do this for each of the four problems.

When groups share results, most agree that math tools are better in different situations and the best tool can save time. The activity can do wonders in explaining why we teach more than just paper and pencil computation.
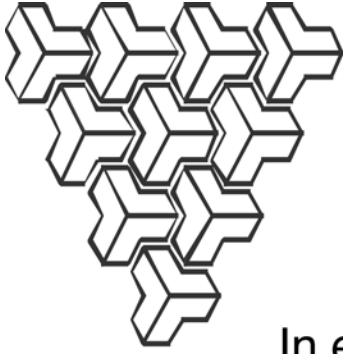
CHOOSING THE BEST MATHEMATICS TOOL

In each of the following problems, decide which is the best Mathematical tool to use on each individual problem (estimation, mental mathematics, pencil and paper, or a calculator). Solve the problem, then discuss why you chose that math tool for that problem.

1. $78\overline{)13256.98}$

☐ Estimation
☐ Mental Math
☐ Calculator
☐ Paper and Pencil

2.
$$\begin{array}{r} 500 \\ \times\ 30 \\ \hline \end{array}$$

☐ Estimation
☐ Mental Math
☐ Calculator
☐ Paper and Pencil

3. Which is closer to 1000?

$$\begin{array}{r} 398 \\ +607 \\ \hline \end{array} \qquad \begin{array}{r} 292 \\ +655 \\ \hline \end{array}$$

☐ Estimation
☐ Mental Math
☐ Calculator
☐ Paper and Pencil

4.
$$\begin{array}{r} 312 \\ \times\ 7 \\ \hline \end{array}$$

☐ Estimation
☐ Mental Math
☐ Calculator
☐ Paper and Pencil