## What Best Practices for Math Instruction Look Like…

<table>
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| **The Teacher’s Role**  
The teacher does most of the talking.  
The teacher *shows* students how to solve problems, often explicitly walking them through a chosen set of steps to solve a problem and expecting them to mimic those steps on similar problems. | **The Teacher’s Role**  
The teacher asks open-ended questions, provides “think time,” and helps students unpack problems. The teacher scaffolds class investigations by selecting samples of student work to discuss so that students can compare/contrast strategies, models, and solutions from their classmates. |
| **The Students’ Role**  
The students do most of the listening.  
Students are not expected to solve a problem before the teacher has worked examples. Students often depend on the teacher to confirm if answers are correct/incorrect. | **The Students’ Role**  
The students do most of the talking and also listen/respond to what their classmates share. Students are encouraged to try new problems and to consider multiple (reasonable) methods for problem solving. The students work together to determine reasonable/unreasonable answers. |
| **“Student Engagement”**  
Students are passive recipients in the process of learning mathematics.  
They may be copying notes, copying examples of the teacher’s work, or working similar practice problems quietly at their desks. | **“Student Engagement”**  
Students are active initiators in the process of learning mathematics.  
They are discussing mathematics with classmates, making observations, asking questions, and making notes of what they discover. |
| **The Goal: To Get the Correct Answer**  
Success in mathematics focuses on “correct steps”/“correct answers.” The teacher encourages non-mathematical methods (tricks, mnemonics, key words, songs, etc.) in order to help students get the correct answer. | **The Goal: To Make Sense of Mathematics**  
Success in mathematics focuses on developing number sense and understanding “why” procedures and algorithms work *beyond the steps*. The teacher helps students build connections to prior knowledge and across topics in order to help students make sense of mathematics. |
| **Instructional Planning**  
The teacher looks to the textbook *first* to sequence curriculum and instruction. Classwork and homework typically focus on numerous skill-based practice problems. Standards are taught as “checklists” of separate items to be mastered each nine weeks. | **Instructional Planning**  
The teacher looks to the grade-level Standards *first* to sequence curriculum and instruction. Classwork focuses on several thought-provoking problems; homework includes extensions or practice problems. Standards are taught as collective progressions of topics to be mastered by the end of the year. |
| **Tools for Success**  
Paper, Pencils, and Calculators/Software | **Tools for Success**  
Students’ Minds, Models/Manipulatives, Paper, Pencils, and (judicious use of) Calculators/Software |

*Madison County Schools  
Math Specialist Team*