



## *Best Practices for Differentiating Your Math Block*

“Increasing Participation through Differentiation”

**Summary:** A balanced mathematics framework provides many opportunities for differentiation where all learners can participate in an equitable manner. This article examines the application of the Balanced Mathematics Framework developed by the Madison Metropolitan School District.

### **Practical Applications:**

The framework has 4 components.

1. Inspecting Equations – whole group work to develop understanding of what equality means and symbolic notation
2. Number Work – whole group work to develop number sense through computation work, separate from story problems
3. Problem Solving – small group work that incorporates story problems from all strands of math, collaboration, and strategy sharing
4. Fluency/Maintenance – individualized math boxes for each student with a menu of activities geared toward developing the fluencies they need

Classroom Examples – The article provides vignettes from the same first grade classroom for 3 of the 4 components of the framework.

Inspecting Equations – Students used their “algebraic thinking” notebooks to choose a “just right” set of numbers and write as many true equations as they can. The choices of numbers allow for immediate differentiation, as some lend themselves to addition and subtraction and others to multiplication and division.

Problem Solving – The teacher meets with a small group of students and reads a story problem to them. They attempt to solve the problem in their notebooks and struggling students are encouraged to listen to peer strategies to add to their toolbox. By reading the problem aloud, the students who are struggling readers are not stuck on the reading portion of the problem. The teacher can adapt the complexity of the problem with the group of students at her table.

Fluency and Maintenance- While the teacher is in small groups, students work independently with their math boxes using a menu of choices. The teacher has customized the menu in each math box so that students are working on fluencies they need. Some choices are independent work and some provide opportunities for group games. Most are paper pencil, dice, or card games.

**Conclusion and Citation:** Teachers in all primary classrooms can inspect equations, create problem-solving groups based on assessment, and create personalized and differentiated math boxes for each child. Any curriculum can be adapted to this framework and this student-driven instruction will increase participation and differentiation.

Christenson, B., Wagner, A., “Increasing Participation through Differentiation” *Teaching Children Mathematics*. 19.3 (October 2012) pp. 194-200 <http://bit.ly/1kjZ9D4> (subscription only).