



# Math Weekly Tidbits

Maryland Common Core State Curriculum Framework  
Maryland School for the Deaf

VOLUME 2 ISSUE 2

SEPTEMBER 12, 2012

Dear Teachers,

This newsletter issue focuses on formative assessment. We are more accustomed to traditional summative assessments, which tests everything that your student has learned within X frame of time. Formative assessment, on the other hand, tests what your student is learning during your immediate instruction. Upon the results, you can then adjust your instruction to better meet your student's needs. It has been called the "GPS of education", a description that I find very fitting.

As always, feedback is welcome. E-mail me if you discover something that you would like to see featured in this newsletter.

Julie Tibbitt

Mathematics Curriculum Coordinator

Columbia Campus

[Julie.Tibbitt@msd.edu](mailto:Julie.Tibbitt@msd.edu)

.....

## Inside this issue:

*Using Formative Assessment: Overview* 2

*Using Formative Assessment: Sample Task #1* 3

*Using Formative Assessment: Sample Task #2* 4

*Resources on Formative Assessment* 5

## Using Formative Assessment

---

The previous newsletter showed a sample of a summative assessment task created by PARCC. Their aim is to create more open-ended tasks so that students can show their true understanding of the mathematical concept in question. Using such formative assessment, in lieu of traditional assessment, will help teachers better address the needs of their students.

Just what is formative assessment? There is no strong consensus on its exact definition, but we do know that it highly promotes student achievement. With formative assessment, teachers assess their students during the entire learning process and adjust their instruction accordingly. It can be formal or informal.

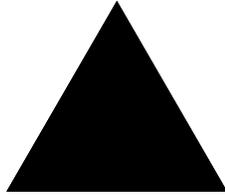
The next two pages show two sample traditional problems typically seen in textbooks, followed by their modified version. These were created by authors Christine Oberdorf and Jennifer Taylor-Cox in their books, **“Using Formative Assessment to Drive Mathematics Instruction”**. There are several separate publications under this title, and the following problems on the next two pages were taken from the “Grades PreK to 2” and “Grades 3 to 5” books.

## Using Formative Assessment

### Traditional Assessment

Name this shape.

- ◇ circle
- ◇ triangle
- ◇ rectangle



### Enhanced Formative Assessment

Ask students to draw or place (from a set of cutout shapes) each shape in the correct box.

Circle	Triangle	Rectangle

What if your student knows the shape but cannot read? He or she would have a 66% chance of getting this wrong, and it would lead the teacher into thinking her student does not know shapes, and adjust her instruction with lower expectations.

With the second task, students' answers will vary and give the teacher much greater insight into their conceptual understanding of shapes. This also serves as an appropriate assessment for students who are still learning to read.

Above example from Christine Oberdorf and Jennifer Taylor-Cox's  
**"Using Formative Assessment to Drive Mathematics Instruction"**

## Using Formative Assessment

### Traditional Assessment

**Which sets of coins equal 50¢? Check (✓) all that apply.**

- ◇ 1 quarter, dime, nickel
- ◇ 2 quarters
- ◇ 4 dimes, 4 nickels
- ◇ 6 nickels, 2 dimes
- ◇ 1 quarter, 2 dimes, 1 nickel
- ◇ 10 nickels
- ◇ 1 quarter, 6 nickels
- ◇ 3 dimes, 5 nickels

*It is possible for students to identify the correct answer(s), but they are not applying any “**algebraic or reasoning skills**”. The task below applies formative assessment to show insight into the **student’s thinking**.*

### Enhanced Formative Assessment

The piggy bank held 5 coins with a value of 50¢. What coins could be in the bank?



Above example from Christine Oberdorf and Jennifer Taylor-Cox’s  
**“Using Formative Assessment to Drive Mathematics Instruction”**

## Resources on Formative Assessment

---

### *Creating a Formative Assessment System*

*The authors offer some practical guidance in setting up formative assessment.*

<http://www.ascd.org/publications/books/111013/chapters/Creating-a-Formative-Assessment-System.aspx>

### *What Are Formative Assessments and Why Should We Use Them?*

*This article offers some ideas for tasks that can be used as formative assessment in the classroom.*

<http://www.scholastic.com/teachers/article/what-are-formative-assessments-and-why-should-we-use-them>

### *PARCC Assessment Design*

*It won't be long before PARCC makes its way into our school, and it is a good idea to become familiar with their assessment design.*

<http://www.parcconline.org/parcc-assessment-design>

### *Formative Assessment of Common Core in Primary Grades*

*Two Howard County teachers presented at the 2012 annual National Council for Teachers of Mathematics conference. Their PowerPoint presentation can be viewed here.*

<http://jsangiovanni.hcpss.wikispaces.net/file/view/NCTM-2012-FormativeAssessment.pdf>