



Math Weekly Tidbits

Maryland Common Core State Curriculum Framework
Maryland School for the Deaf—Columbia Campus

ISSUE 1

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Upward & Onward!

Dear Teachers,

Thank you so much for the warm welcome! This is only my first day, and already I'm continually reminded of why this is a such special place to work in! We have a very strong "community-sense"! I can see very clearly how the teachers here share resources and work together to accomplish common goals!

I hope to use this newsletter as a way of sharing, as well. I am working hard to learn more about the Maryland Common Core State Curriculum Framework ([MD-CCSF](#)). I will also work hard to make you all feel comfortable using it. :-)

Not only is the MD-CCSF organized in a new and different format, much of its content is dense and can be somewhat hard to read. This new curriculum also adheres to a new approach in teaching mathematics; instead of going a "mile wide" (trying to cover many things at once), you are now expected to go a "mile deep" (making sure your students REALLY understands what they are learning!).

That is exactly why I am here; to help us transition to the new curriculum. You all are already wonderful teachers, and I know I will learn from each of you just as much as what you will hopefully learn from me!

I am excited to be here! Come and visit me anytime—I am right outside Elizabeth Reed's office!

Upward & Onward!

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Ideas for this
newsletter are
always welcome!

Important Terms You Need to Know

The MD-CCSCF has five essential terms which we all need to understand.

Domains show the general content area. You will see those on the top of each page.

Clusters show smaller groups of related standards. They are like subheadings for each group of closely related standards. You will see those in the left column.

Standards tell you what students should understand and be able to do. You will see those in the middle column.

Essential Skills and Knowledge offer additional clarification on what some standards mean. This helps teachers stay in agreement on what the standards are meant to cover.

Standards for Mathematical Practice tell you the “habits” that teachers are encouraged to develop in all students. These are applicable not only toward math, but also just about any other content area! You will see those in the right column.

DOMAIN: Counting and Cardinality		
Cluster	Standard	Mathematical Practices
Know number names and the count sequence.	<p>Standard: PK.CC.1 Count verbally to 10 by ones. (SC PK)</p> <p>Essential Skills and Knowledge</p> <ul style="list-style-type: none"> Ability to rote counting number words in order Ability to use verbal counting as meaningful counting to solve a problem, such as finding out how many are in a set <p>Standard: PK.CC.2 Recognize the concept of just after or just before a given number in the counting sequence up to 10.</p> <p>Essential Skills and Knowledge</p> <ul style="list-style-type: none"> Ability to use concrete materials and/or number cards arranged in a line to count and then determine what number comes before or away a specific number Students are not expected to write numerals at this time. 	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of

Highlight: The First of 8 Standards for Mathematical Practice

Make sense of problems and persevere in solving them. “Does this make sense?” is one question your student should keep on asking as he solves a problem.

How do we teach this? We need to do lots of modeling. We can discuss the meaning of a problem and seek a plan to solve. We can compare the problem to other problems, or change different parameters of the same problem. Younger students can go back to using concrete objects to help ‘conceptualize’ and solve a problem. Older students can check their answers using different methods. The whole process of solving should include a look at different approaches, and why they all lead to the same solution (or not!).

Application Example:

Standard PK.G.2 (Pre-Kindergarten, Domain “Geometry”, Standard #2)

“Group the shapes by attributes”

There are many ways to consider what makes a true triangle!

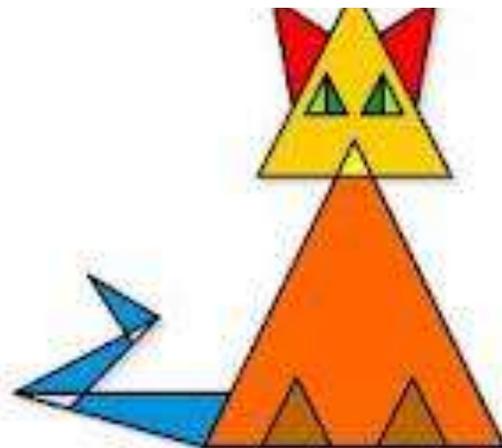
Besides simply counting to three (sides), what are other ways the student can use to decide whether a triangle is really a triangle?

- How about comparing it to other known triangles?
- Compare it to other rectangles, circles or other shapes?
- Does it matter if the three lengths are different?
- Should we worry about color?
- Should we worry about overall size?

Why or why not?

When your student can explain why something is not a triangle, this shows that ... he is making sense of the problem!

How many triangles do you see here?



Interesting Tidbit: Using Fingerspelling to Teach Math

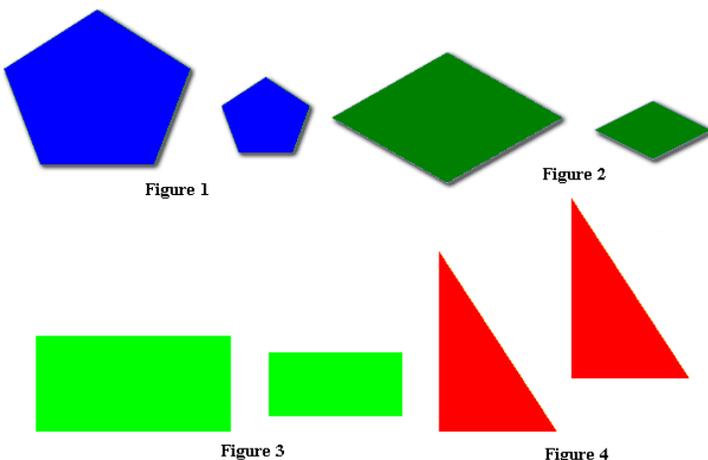
How many of us have experienced the frustration of deciding how to sign shapes while teaching math concepts? I know I have!

Recently, I came across a fascinating report, *“Moving Toward The Standards: A National Action Plan for Mathematics Education Reform for the Deaf”*, which was published by Gallaudet University in 1995. The report itself was put together by the National Action Plan for Mathematics Education Reform for the Deaf (NAPMERD) committee. It shares many interesting points and recommendations concerning deaf students and mathematical education.

According to the report, vocabulary and language must be carefully considered by math educators. Many specific words signal generalized concepts, but their accompanying sign may be highly ‘iconic’ or restricting. Inventing signs to show the meaning of a concept within a class will not allow the students to convey similar meaning in other classes or contexts. Also, it can limit the student’s conceptual understanding of the whole ‘power’ that a single word can convey.

For example, “congruent” is sometimes signed as “same”. However, this really only applies to the same shape and size of any given two figures (and those should be transformable). This is not the same as “similar”, yet the sign for “similar” is...well, the same as the sign for “same”! See how students (and educators) can get confused when trying to use the word outside math class?

Hence, it is highly encouraged that teachers use fingerspelling rather than inventing new signs (unless it becomes widely accepted by the entire deaf community) when introducing math-



Which two figures are congruent?

Which two figures are similar?

Websites You MUST Bookmark

Maryland Common Core Curriculum Frameworks

<http://www.mdk12.org/instruction/commoncore/index.html>

“Since the adoption of the standards, educators from around the state have met to determine the Essential Skills and Knowledge associated with these standards. The draft frameworks that follow are the result of this work. It is important to view these frameworks in color. The Common Core State Standards appear in black and the Essential Skills and Knowledge added by Maryland educators appear in red. These draft frameworks will be introduced to teachers and administrators at the Educator Effectiveness Academies this summer. Over the next several years, the Maryland Common Core State Curriculum will be developed by Maryland educators to support the implementation of these new standards.”



Maryland Council of Teachers of Mathematics

<https://www.marylandmath.org/>

“MCTM is a public voice of mathematics education, inspiring vision, providing leadership, offering professional development, and supporting equitable mathematics learning of the highest quality for all students.”



Learning Disabilities Online

<http://www.ldonline.org/educators>

“Whether you're a general or special education teacher, principal, specialist, or paraprofessional, you play a vitally important role in helping children with learning disabilities achieve their full potential. LD OnLine has gathered the following resources to assist you in your important job!”

