FIVE STEPS FOR HELPING STUDENTS LEARN COMMON CORE STATE STANDARDS

Step 1 - "What standard do I want each student to learn?" Select a common core state standard to describe what you want each student to learn.

Example Standard:

Grade 4

Operations and Algebraic Thinking: 4.OA

Use the four operations with whole numbers to solve problems – The student will:

☐ 1. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

☐ 2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
Note: See Glossary, Table 2

☐ 3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Gain familiarity with factors and multiples – The student will:

☐ 4. Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

Generate and analyze patterns – The student will:

☑ 5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*

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Step 2 - "How will I help each student to learn the standard?"

Select a learning strategy to help each student to learn the standard.

Example learning strategy aligned with standard - Part 1:

Warming-up for Learning:

Slate Board/Journal (10 Minutes): This is a quick mathematics problem or idea presented to start mathematical thinking! *For example, How much is 1/2 an hour in minutes?* Select and adapt a slate board/journal strategy below to get started.

Strategy:

Enter problem:

OR

Mental Computation (10 Minutes): Tell the students: Do this "in your head," then write only the answer! *For example, What is the sum of 56 + 44 = ?* Describe a mental computation strategy below to get started.

Strategy:

Enter Mental Computation:

Teaching for Learning:

Part I: Whole Class (20-25 Minutes): Extend your warm-up by selecting and describing one or more of the following strategies and tools to teach the whole class as a group.

Mathematics Instruction Tools:

- Number Line (0-25 or 0-100)
- Hundred Chart
- Multiplication Chart
- Addition/Subtraction Charts
- Place Value Mat

Learning Strategy:

- Concrete Strategy:
- Symbolic Strategy:
- Representational Strategy:

Instructional Procedures:

- Procedure 1:
- Procedure 2:
- Procedure 3:

Closure Activity:

Enter closure activity:

Assessment - Selected Responses:

Multiple Choice Items

Assessment - Constructed Responses:

Performance Task

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Step 2 - "How will I help each student to learn the standard?"
Select a learning strategy to help each student to learn the standard.

Example learning strategy aligned with standard - Part 2:

Part II: Ongoing Learning and Practice (10-15 Minutes): Select and describe one or more of the following strategies for ongoing learning, practice, and feedback.

Strategy:

Partner:
Small Group:
Independent Learning:

Assessment - Selected Responses:

Multiple Choice Items

Assessment - Constructed Responses:

Performance Task

Part III: Differentiation (10-15 Minutes): Based on the students level of mastery of the expected learning objectives, select and describe one or more of the following strategies to differentiate instruction for re-teaching and enrichment strategies for specific groups of students.

By Readiness:

Advanced:
Proficient:
Basic:
Below Basic:
Other:

By Learning Preference:

Verbal:
Visual:
Kinesthetic:
Other:

By Interest:

Books:
Hobbies:
Subjects:
Other:

Part IV: Homework (10-15 Minutes): Select and describe below how you will specify the expectations for homework to ensure students know what to do and when to submit homework.

Homework:

What is expected?
How to do it?
When is it due?
Other:

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Step 2 - "How will I help each student to learn the standard?"
Select a learning strategy to help each student to learn the standard.

Example learning strategy aligned with standard - Part 3:

Assessing for Learning:

1. Formative: Identify below one or more of the following assessment tools to assess the results of the lesson activities and provide feedback to each student on progress to achieve the standards of learning for this lesson. Then, start a new TaskBuilderOnline task to develop the selected and constructed response items you identified for students to complete.

Selected Responses:
Multiple Choice Items

Constructed Responses:
Performance Task

2. Connections: Describe here how you will use one or more of the following to connect the results of this lesson to your overall unit of instruction and the next lesson.

Mathematics Instruction Tools:
Number Line (0-25 or 0-100)
Hundred Chart
Multiplication Chart
Addition/Subtraction Charts
Place Value Mat

Supporting Teaching for Learning:

Support: Select and specify the materials needed to support the lesson activities and strategies.

Materials for Instruction:
Software:
Hardware:
Paper:
Manipulatives:
Calculator:
Other:

Source: This activity template was developed by Jeanine Brizendine in collaboration with LearningFront consultants. It is a "work in progress" and will be continuously improved based on additional teacher ideas and use in the classroom to increase student achievement. Search "Brizendine" on the "Find New Colleagues" page to contact Ms. Brizendine. (Updated: 7/20/11)

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Step 3 - "How will I know each student is learning the standard?" Select a scoring tool to determine student progress and demonstration of the standard.

Example scoring tool aligned with standard and learning strategy:

Maryland MSA Mathematics - ECR Rubric - Grades 3-8	
Score 3	The response demonstrates a comprehensive understanding and analysis of a problem. • Application of a reasonable strategy in the context of the problem is indicated. • Explanation of and/or justification for the mathematical process(es) used to solve a problem is clear, fully developed, and logical. • Connections and/or extensions made within mathematics or outside of mathematics are clear and stated explicitly. • Supportive information and/or numbers are provided as appropriate.
Score 2	The response demonstrates a general understanding and analysis of a problem. • Application of a reasonable strategy in the context of the problem is indicated. • Explanation of and/or justification for the mathematical process(es) used to solve a problem is feasible, but may be only partially developed. • Connections and/or extensions made within mathematics or outside of mathematics are partial or overly general, or may be implied. • Supportive information and/or numbers are provided as appropriate.
Score 1	The response demonstrates a minimal understanding and analysis of a problem. • Partial application of a strategy in the context of the problem is indicated. • Explanation of and/or justification for the mathematical process(es) used to solve a problem is logically flawed or missing. • Connections and/or extensions made within mathematics or outside of mathematics are flawed or missing. • Supportive information and/or numbers may or may not be provided as appropriate.
Score 0	The response is completely incorrect, irrelevant to the problem, or missing.
Notes: 1. **Explanation** refers to students' ability to communicate **how** they arrived at the solution for an item using the language of mathematics. 2. **Justification** refers to students' ability to support the reasoning used to solve a problem, or to demonstrate **why** the solution is correct using mathematical concepts and principles. 3. Students need to complete rubric criteria for **explanation, justification, connections**, and/or **extensions** as cued for in a given problem. 4. Merely an exact copy or paraphrase of the problem will receive a score of "0."	
Rubric Document Date: August 2003	
Source: http://mdk12.org/assessments/k_8/mathscoring_ecr.html	

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Step 4 - "How will I know that my learning strategy worked?" Select a way to organize the results of scoring student performance on your standard.

Example results tool aligned with standard, learning strategy, and scoring tool:

Data-Driven Results Disaggregated by All Students and AYP Sub Groups

Directions: Complete this chart for each content standard and aligned scoring tool used to measure student performance in classrooms. In order to judge student growth across assessments, record data from only one scoring tool on one chart. Then, follow these steps:

1. For each student's performance on your scoring tool, enter his or her score in the appropriate cell under the headings for Scoring Results, e.g., 3, 2, 1, or 0 on a four-point rubric. The first example below shows that Jason Anderson scored a 3. His score is entered under the "All Students" heading and under "Black" students.
2. Enter the summary data at the bottom of each assessment column for all students and each sub group.
3. Analyze the results and relate them to the instructional processes used to teach the standards-based lesson to all students, to white students, to black students and so forth, e.g., what worked well, what needs improvement, what was learned for improving instruction and student learning?
4. Edit this table on the TaskBuilderOnline Design Page to add student names, to rename disaggregated groups, or to make other modifications. Also, you may delete these directions from this table after you become familiar with this data analysis process.

Content Standard: (Enter the content standard, indicator, objective, assessment anchor, or eligible content that your scoring tool measures...)

Students	**Scoring Results**					
Last Name and First Name	**All Ss**	**White**	**Black**	**Latino**	**IEP**	**EcDis**
1. Example: Anderson, Jason	3		3			
2. Example: Anderson, Susan	2				2	
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
# Of students at the Advanced Performance Level						
# Of students at the Proficient Performance Level						
# Of students at the Basic Performance Level						
% of Students equal to or greater than the Proficient Level (Total # of students at the proficient and advanced levels divided by the total number of students)						
% Distance above or below school Annual Measurable Objective (AMO)						

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Step 5 - "What will I do to improve?" Select a way to analyze the results of your learning strategy to improve instruction and student learning of the standard in new lessons.

Example action tool aligned with the standard, learning strategy, scoring tool, and results tool:

Analyze: I will examine the data in the chart to look for trends, contributing factors, and implications of student performance over a series of assessments of the same learning standard.

- ☐ Trends:
- ☐ Contributing factors:
- ☐ Implications for student performance:

Reflect: I will consider two or more of the following stems to reflect on the results and instructional practices I used and others I might benchmark and apply in the future. Then, I'll write a brief summary about my findings, contributing factors, and implications for improvement.

- ☐ As I relate my students' results with my lesson activities, I noticed that...
  - (Enter short activity description) had the most influence on student achievement because:
  - (Enter short activity description) had the least influence on student achievement because:
  - (Enter short activity description) has the most promise for becoming a best practice in my classroom because:
- ☐ I was surprised that...
- ☐ I can't understand...
- ☐ This connects to...
- ☐ My students will...
- ☐ Research on best practices related to this learning standard indicates...
- ☐ Schools that do well on this learning standard have used...
- ☐ I didn't realize that...
- ☐ What was valuable?...not valuable?

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Want to learn more - And develop your own approach to helping students to learn common core state standards?

Watch a video that demonstrates the five steps:

Click here

Join LearningFront - And use free integrated social media and professional development tools demonstrated in the video to improve teaching and student learning!

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