Student Learning Objective (SLO) for *Grade 5 Mathematics*

SLO Component	Description
Objective Summary Statement	Students will add and subtract fractions with unlike denominators using visual fraction models and equations in order to solve problems.
Rationale	Elimination of the achievement gap is a system-wide and school-wide priority as part of the strategic plan and the school improvement plan. Understanding fractional concepts is part of the major work of the fifth grade mathematics curriculum, and leads to an in-depth understanding of related topics such as decimals and percents. The identified students need additional support/instruction/intervention to achieve proficiency when adding and subtracting fractions with unlike denominators as required by the State Standards for Mathematics as they scored below 75%. Data revealed from assessments and classroom observations that the students need to solidify their understanding of fractions in order to move to higher level thinking with fractions. Students need to develop the conceptual understanding of the fractional whole and equivalent fractions, and use visual models before using the algorithm. This may be compounded by (insert complexity factors such as attendance rate, ELL population, transient rate, FARMS, high percentage of students with IEPS) in Grade 5.
Data Review and Baseline Evidence (Beginning of instructional interval)	The data selected for this SLO (insert school specific data): • 2012 Grade 4 MSA (in the basic range or at low proficient) • Pre-test data (12 questions specific to 5.NF.1) on the *Do the Math* Fraction module C for special education students
Student Population	This SLO will focus on 80% (8 out of 10) or greater of Grade 5 Special Education students who scored in the basic or low proficient range on the 2012 Grade 4 MSA.
Learning Content	State Standards • 5.NF.1 Add and subtract fractions with unlike denominators(including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or different of fractions with like denominators.

Source: Anonymous Educator from a District in Maryland

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Instructional Interval	This SLO will be monitored and measured at the beginning, during the instructional interval, and at the end of the six week intervention period for *Do the Math* as measured by pre- and post-tests. Instructional strategies will be taught during regular classroom instruction for the fraction cluster and during the intervention module so students develop the conceptual understanding of fractions and are able to solve problems with adding and subtracting with unlike denominators. • Strategies will be taught within the normal 60 minute class period as per the curriculum. • Small group or push-in/pull-out sessions for 30-40 minutes as recommended by *Do the Math* guidelines.
Target	Of the 8 students in the targeted population, 62.5 %- 75% of these students will improve their percentage score on the *Do the Math* Fraction Module C pre-test by a minimum of 33.3% or reach a score of 75% on the *Do the Math* Fractions Module C post-test on the 12 questions pertaining to 5.NF.1.
Evidence of Growth (Conclusion of instructional interval)	Students will • Demonstrate the conceptual understanding of the fractional whole • Use equivalent fractions to find common denominators • Use visual fractions and drawings to explain their responses • Participate in individual conferences • Improve by a minimum of 33.3% on the Do the Math Fraction Module C post-test (12 questions pertaining to 5.NF.1) Students will use Thinking Maps as appropriate for each of the above.
Strategies	Students will receive support through differentiated instruction that may include small group or one-on-one sessions as necessary. Strategies to be taught will include: o Concrete models and drawings to model the fractional whole and equivalent fractions o Thinking Maps o Cooperative learning strategies such as Think/Pair/Share o Computer aided instruction, as appropriate (virtual manipulatives) o Games to enhance practice o Reflecting upon student work collaboratively with the special educator to analyze errors and determine misconceptions for reteaching and clarifying instruction

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<table>
<tr><td>Teacher Professional Development (PD) and Support</td><td>Suggested Professional Development
Use Thinking Maps for problem solving
Collaboratively plan with Special Educator
Read Teaching Student Centered Mathematics Grades 3-5, Chapters 5 and 6
Continued professional development for applying the Universal Design for Learning to mathematics lessons
Use MSDE Frameworks to clarify instruction</td></tr>
<tr><td>Data Table</td><td>
<table>
<tr><th>Student Name</th><th>Pre-test score (12 items)</th><th>Post-test score (12 items)</th><th>Percent point increase between pre- and post-test</th><th>Did the student have an increase of 33.3% or greater percentage points (or achieve 75% on post-test)?</th></tr>
<tr><td>Kacey</td><td>50%</td><td>91.6%</td><td>41.6%</td><td>Yes</td></tr>
<tr><td>Abby</td><td>62.5%</td><td>75%</td><td>8.3%</td><td>Yes</td></tr>
<tr><td>Andrew</td><td>75%</td><td>83.3%</td><td>8.3%</td><td>Yes</td></tr>
<tr><td>Chris</td><td>66.6%</td><td>91.6%</td><td>25%</td><td>Yes</td></tr>
<tr><td>Ken</td><td>25%</td><td>75%</td><td>50%</td><td>Yes</td></tr>
<tr><td>Benito</td><td>66.6%</td><td>91.6%</td><td>25%</td><td>Yes</td></tr>
<tr><td>Sue</td><td>50%</td><td>58.3%</td><td>8.3%</td><td>No</td></tr>
<tr><td>Rick</td><td>58.3%</td><td>66.6%</td><td>8.3%</td><td>No</td></tr>
<tr><td></td><td></td><td></td><td></td><td>75% met SLO</td></tr>
</table>
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