JALSD Student Learning Objective (SLO) Template For Developing and Submitting an SLO

Student Learning Objective (SLO) Submission Form – **This form is on the PD flash drive for use by teachers.**

Teacher Name: __ Content Area and Course(s): Mathematics   Grade Level(s): __3rd__Academic Year: _

Please use the guidance provided in our JTES Handbook to develop components of the SLO and populate each component in the space below.

Baseline and Trend Data
What information is being used to inform the creation of the SLO and establish the amount of growth that should take place?

This baseline data is based on results from a district-created, cumulative pre-assessment, covering the district's yearly 3rd grade mathematics curriculum, which is aligned to Ohio's New Learning Standards. The pre-assessment consists of 66 multiple-choice questions to show students' background knowledge of concepts covered in the 3rd grade mathematics course. The pre-test consisted of numbers, place value, money and patterns; basic facts and computation; measurement; data analysis; and problem solving. Pre-test scores ranged from 0% to 97% accuracy. Mastery level for an individual standard is 75%. 49% of the students tested showed mastery in the numbers, place value, money, and patterns, while 41% showed mastery in basic facts and computation. 47% of students showed mastery in measurement and 41% of students showed mastery in data analysis and probability. 48% of students showed mastery in the area of problem solving. District-wide and individual classroom pre-assessments did not indicate a statistically significant difference between strengths and weaknesses for this group of students. Individual scores for Anna Berardinelli's class are as listed below. Given that fact knowledge and computation are essential to all areas of mathematics the area of basic facts and computation will be the focus of this SLO. The trend data from previous years OAA math assessments indicated deficits in the area of numbers, number sense and operations which include computation.

Pre-Assessment data: Pre-Test Results (Score Ranges)	# of students & contextual factors
0 – 20%	0 (0 IEP, 0 504)
21-40%	6 (2 IEP, 0 504)
41-60%	15 (2 IEP, 0 504)
61-80%	5 (0 IEP, 0 504)
81-100%	1 (0 IEP, 0 504)

Student Population
Which students will be included in this SLO? Include course, grade level, and number of students.

The SLO covers all 28 3rd grade student in Mrs. Berardinelli's class who received 1 hour of math instruction daily. 4 of these students are identified as students with special needs and an IEP including 1 with written expression, 2 with specific learning disabilities and 1 other health impaired. They will also receive 30 minutes daily of small group instruction to re-teach, pre-teach and review concepts. I will work collaboratively with classroom teachers to ensure that students are provided instructional and testing accommodations. 5 of the 28 students receive Title I service for 30 minutes daily. Mrs. Berardinelli's class has a 63% deprivation rate (students on free and reduced. Students who have missed 45 or more days of instruction have been excluded from the SLO final rating; however, the pre and post assessment data has been collected and analyzed.

Interval of Instruction
What is the duration of the course that the SLO will cover? Include beginning and end dates.

This class is a yearlong course taught in a one period class, or 75 minutes, attended daily by students. This SLO covers an interval of instruction beginning August 28, 2013 and ending on April 18, 2014. The interval of instruction takes into account the May 1 deadline established by the OTES timeline.

Standards and Content
What content will the SLO target? To what related standards is the SLO aligned?

This SLO focuses on the entire yearlong course content as established within the guidelines of Ohio's New Learning Standards for grade 3 Mathematics. The grade band theme is *Operations and Algebraic Thinking*. This SLO will cover these topics and content statements:

 Represent and solve problems involving multiplication and division.

CCSS.Math.Content.3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7*.

CCSS.Math.Content.3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8*.

CCSS.Math.Content.3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.[1]

CCSS.Math.Content.3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?*

Understand properties of multiplication and the relationship between multiplication and division.

CCSS.Math.Content.3.OA.B.5 Apply properties of operations as strategies to multiply and divide.[2] *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*

CCSS.Math.Content.3.OA.B.6 Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Multiply and divide within 100.

CCSS.Math.Content.3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

CCSS.Math.Content.3.OA.D.8 Solve two-step word problems using the four operations. 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.[3]

CCSS.Math.Content.3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

Assessment(s)
What assessment(s) will be used to measure student growth for this SLO?

I will assess students using a district approved cumulative post assessment, which covers the content of Ohio's New Learning Standards for grade 3 Mathematics. Math content-specialists collaboratively developed and authored the post assessment, which will mirror the content tested in the pre-assessment. Accommodations for students on an IEP will include: 4 students will receive extended time for the assessments, 4 will receive a scribe, 4 will be tested in small groups, and 4 students will have the exam read aloud to them. To further measure student growth for advanced students, students scoring 90% or higher on the pre-test will be assigned an end-of-course capstone project in addition to the end-of-course exam. Each project will be evaluated using a district-created and approved rubric that assesses the course content using higher levels of Bloom's taxonomy.

For students who are assigned an end-of-course capstone project, post assessment data will be collected as a performance assessment out of 100 points. Their project will account for 30% of their growth target, and the post assessment will account for 70% of their growth target. Students must score a 80 on their capstone project to meet their growth target. Students who were not assigned the capstone project, their post assessment data will be comprised entirely of their end-of-course exam score.
Pre and post assessment data will be compared to measure student growth.

Growth Target(s)

Considering all available data and content requirements, what growth target(s) can students be expected to reach?

Students will increase their knowledge of 3rd grade math concepts and will be measured by comparing the results of the pre-assessment and the post-assessment and possible capstone project. I have set tiered growth targets for my students. All students will be expected to achieve at least a target score of 60, which is the passing score for my district. Students' score on the pre assessment determine their growth target for the post-assessment.

Baseline Score Range (based on pre-assessment)	Target Score
0-20	60
21-40	60
41-60	75
61-80	90
81-100	90 (includes a capstone project for those students scoring 90% or better on the pre-assessment; students must score a 80% or better on the capstone project)

Rationale for Growth Target(s)

What is your rationale for setting the above target(s) for student growth within the interval of instruction?

I set tiered targets to help ensure that all students will be able to demonstrate developmentally appropriate growth. Because the 3rd grade math concepts serve as prerequisites for future math courses, it is essential that students grasp the basic concepts set forth in Ohio's New Learning Standards for 3rd grade math. More instructional time will be devoted to basic facts and computation due to the low pre-assessment scores observed and past cohorts' struggle with number, number sense, and operations which include this topic. Given that computation and basic fact knowledge is essential to all areas of mathematics, this will be the focus. Students who scored lower on the pre-assessment will be expected to demonstrate more growth in order to meet grade-level expectations. Students with an IEP specifically have difficulty retaining and recalling information, therefore, obtaining the lowest target score of 60% may not be achievable. Students in the lowest quintile with a documented education plan (IEP) will show 25 point improvement given the post-assessment in math. In addition, to assure enough stretch for my highest performing students, I will include the results of their capstone project in their growth target. They will be required to score a 80 or higher on their capstone project in addition to scoring a 95 on the post-assessment. The growth targets are representative of district and building goals. The lowest target score of 60% was chosen by our district.