

Student Growth Objective Form

(DISTRICT-DEVELOPED SAMPLE SGO for Integrate math III; 2 of 2)

Name	School	Grade	Course/Subject	Number of Students	Interval of Instruction
			Integrated Math III		Sept 2018 – April 2019

Standards, Rationale, and Assessment Method

Rationale:

Students will apply the mathematics they know to solve problems arising in everyday life, society and the workplace. They are able to identify important quantities in a practical situation and map their relationships using mathematical tools. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose. Students also will notice if calculations are repeated, and look both for general methods and for shortcuts. They maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results. In high school PARCC assessment, at least 30% of total score points are items assessing application.

High school students also should understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. High school students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. High school students learn to determine domains to which an argument applies, listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Standards:

- A.CED.1:** Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
- A.CED.2:** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
- A.CED.3:** Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.
- A.CED.4:** Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.
- F.IF.4:** For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.
- F.IF.5:** Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
- F.IF.6:** Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

- F.IF.7:** Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*
- F.BF.1:** Write a function that describes a relationship between two quantities
- F.BF.4:** Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression or the inverse.
- F.LE.4:** For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a , c , and d are numbers and the base b is 2, 10, or e ; evaluate the logarithm using technology.

Focused Mathematical Practice Standards:

MP 1: Make sense of problems and persevere in solving them

MP 2: Reason abstractly and quantitatively.

MP 4: Model with mathematics.

MP 5: Use appropriate tools strategically.

Assessment Method: Authentic Assessments (Assessment Portfolio) will be used as a tool to measure students' growth. The assessment portfolio incorporates carefully selected practice-forward tasks that reflect higher levels of cognitive complexity. All tasks included in the portfolio will be "practice forward" and rubric-scored.

Starting Points and Preparedness Groupings

Student tiers will be determined using 2018 Fall NWEA scores to develop a baseline index. Each tier will be assigned a target command level.

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Preparedness Group	Baseline percentiles
Tier 1	<21
Tier 2	21-40
Tier 3	41-60
Tier 4	61-80
Tier 5	>80

Student Growth Objective

By April 2019, 80% of students in each preparedness group will meet their assigned target command level for full attainment of the objective as shown in the scoring plan.

Preparedness Group (e.g. 1,2,3)	Number of Students in Each Group	Target Command Level on SGO Assessment Portfolio
Tier 1		>=2
Tier 2		>=3
Tier 3		>=4
Tier 4		4 or 5 ¹
Tier 5		5

Scoring Plan

State the projected scores for each group and what percentage/number of students will meet this target at each attainment level. Modify the table as needed.

Preparedness Group	Student Target Command Level	Teacher SGO Score Based on Percent of Students Achieving Target Score			
		Exceptional (4) >80%	Full (3) 79-80%	Partial (2) 50-78%	Insufficient (1) <50%
Tier 1	2				
Tier 2	3				
Tier 3	4				
Tier 4	4 or 5				
Tier 5	5				

Approval of Student Growth Objective

Administrator approves scoring plan and assessment used to measure student learning.

Teacher _____ Signature _____	Date Submitted _____
Evaluator _____ Signature _____	Date Approved _____

¹ It is expected that students in Tier 4 maintain a level of strong command or grow to distinguished command.

Results of Student Growth Objective

Summarize results using weighted average as appropriate. Delete and add columns and rows as needed.

Preparedness Group	Students at Target Score	Teacher SGO Score	Weight (based on students per group)	Weighted Score	Total Teacher SGO Score
Tier 1					
Tier 2					
Tier 3					
Tier 4					
Tier 5					

Notes

Describe any changes made to SGO after initial approval, e.g. because of changes in student population, other unforeseen circumstances, etc.

Review SGO at Annual Conference

Describe successes and challenges, lessons learned from SGO about teaching and student learning, and steps to improve SGOs for next year.

Teacher _____ Signature _____ Date _____

Evaluator _____ Signature _____ Date _____