Student Growth Objective Form – Science Practices

Name	School	Grade	Course/Subject	Number of Students	Interval of Instruction
Teacher		Grade	Science Practices	#	September 2019 to April 2020

Standards, Rationale, and Assessment Method

Rationale

Conceptual learning and understanding in science requires students to gather, reason with, and communicate scientific information. The claim, evidence and reasoning (CER) is a framework that teachers can use to help students develop these scientific explanations and arguments. It serves as a tool or vehicle by which students are able to develop a clear, coherent, and complete written argument that draws on core science concepts and crosscutting ideas.

The Next Generation Science Standards identifies, for each grade level or grade band, the performance expectations (PEs), or what students should know and be able to do at the end of instruction. They represent the integration of the three "dimensions" of science education: scientific and engineering practices (SEPs), disciplinary core ideas (DCIs), and the crosscutting concepts (CCCs). As such, both student learning and assessment around the NGSS should be "three dimensional".

From the Framework for K-12 Science Education pg. 41

Engaging in the practices of science helps students understand how scientific knowledge develops; such direct involvement gives them an appreciation of the wide range of approaches that are used to investigate, model, and explain the world.

The Science and Engineering Practices for K-12 Science Classrooms will be addressed in this SGO in alignment with and support of the NGSS specific to the grade-level.

- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

Assessment Method
Authentic CER rubric-scored prompts and written responses will be used throughout the year to measure students' growth. These prompts will consist of tasks that support the CER Framework.

Starting Points and Preparedness Groupings
Students will be tiered as determined by a data point system that uses 3 points of data. Each tier group will be assigned a target level.

Data Measures used to Establish Baselines
2018-2019 Final Science Grade; weight (.35)
Unit 1 Science Pre-Assessment; weight (.35)
Unit 1 Science Investigation activity (Teacher Selected): weight (.30)

Student Growth Objective

By the end of April 2020, 70-75% 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.

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	# Students in the Group	Teacher SGO Score Based on Percent of Students Achieving Target Score			
			Exceptional (4) >75%	Full (3) 70-75%	Partial (2) 65-69%	Insufficient (1) <65%
Below Level	85%					
On Level	80%					
High (Above Level)	70%					

Approval of Student Growth Objective

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

Teacher: _____   Signature_____   Date Submitted_____

Evaluator: _____   Signature _____   Date Approved _____

Results of Student Growth Objective

Preparedness Group	Students at Target Score	Teacher SGO Score	Weight (based on students per group)	Weighted Score	Total Teacher SGO Score

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 Submitted_____

Evaluator: _____   Signature_____   Date Approved _____

Revised 10.14.16