



**Office of Educator Effectiveness**

**FIRST DRAFT SLO**

- This SLO serves as the Professional Growth and Development Plan (Section I only)
- This SLO serves as **one** of multiple goals of the Professional Growth and Development Plan. (Section I and II)

**Section I. SLO**

<b>Teacher Name:</b> Sandra Casper	<b>Teacher School:</b> Model School District / Exemplary Middle School
<b>SLO Evaluator Name:</b> Andrew MacManus <b>SLO Evaluator Position/Role:</b> (Science Department Lead)	
<b>Grade Level:</b> 7	<b>SLO Content Area:</b> Science
<b>SLO Type:</b> <i>Choose One</i> <input checked="" type="checkbox"/> Individual <i>(written by an individual teacher)</i> <input type="checkbox"/> Team <i>(team of teachers focus on a similar goal but are held accountable for only their students)</i>	<b>SLO Approach:</b> <i>Choose One</i> <input type="checkbox"/> Class <i>(covers all of the students in one class period i.e., 2nd period Biology, 4th period Beginning Pottery, etc.)</i> <input type="checkbox"/> Course <i>(covers all of the students enrolled in multiple sections of the course (i.e., all of a teacher's Biology 2 students, all of a teacher's Beginning Pottery students, etc.)</i>
<b>SLO Interval of Instruction</b> <i>Choose One</i> <input checked="" type="checkbox"/> Year <input type="checkbox"/> Semester <input type="checkbox"/> Other	<b>Assessment Dates</b> Pre Assessment Date: 9/10/14 Post Assessment Date: 5/6/15



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<p>If <i>Other</i>, provide rationale (i.e. quarter long course) and indicate days of instruction.</p> <p>Rationale: <a href="#">Click here to enter text.</a></p> <p>Days of Instruction: 8/19/14 to 6/4/15</p>	
<p><b>I. Student Population</b>          Provide a detailed description of the student population. Information should include, but is not limited to, the following: the number of students in the class, a description of students with exceptionalities (e.g., learning disability, gifted and talented, English language learner [ELL] status, etc.), and a description of academic supports provided to students (e.g., extended time, resource time with EC teacher, any classroom supports that students receive to help them access the core curriculum).</p> <p>All 7th grade science students (122)</p>	
<p><b>II. Historical and Trend Data</b>          Describe the applicable past data for the students. In your description included the students' level of knowledge prior to instruction, including the source(s) of data (e.g., formative and summative assessments, anecdotal data gathered from collaboration with other educators) and reflect on the relevance to the overall course objectives.</p>	
<p><b>III. Baseline Data</b>          Describe which pre-assessment(s) will be used to measure student learning and why the assessment is appropriate for measuring the objective(s). Provide baseline assessment results for the student population. Attach the assessment and grading scale and/or rubric used to score the assessment(s).</p> <ul style="list-style-type: none"> <li>• 33% of students earned a score of 1 on the baseline assignment.</li> <li>• 54% of students earned a score of 2 on the baseline assignment.</li> <li>• 5% of students earned a score of 3 on the baseline assignment.</li> </ul> <p>8% of students earned a score of 4 on the baseline assignment.</p>	
<p><b>IV. Post Assessment</b>          Indicate what assessment will be used as a post assessment and how it is aligned to the baseline assessment. Pre- and Post-assessments are the A and B versions of the final exam, in which students will answer multiple choice questions and write responses based on content knowledge. Students will also be expected to complete data collection and analysis in labs satisfactorily.</p>	
<p><b>V. Progress Monitoring</b>          How frequently will you progress monitor students' mastery of content? Indicate what ongoing sources of evidence you will collect in order to monitor student progress. (Other evidence of student growth can include student work samples, portfolios, etc.)</p> <p>I will monitor student learning by examining student progress on labs throughout the year. If students do not make adequate progress, I will require that they complete their independent inquiry project with my guidance and check-ins throughout the process to address challenges.</p>	
<p><b>VI. Learning Goal (Objective)</b>          Provide a description of what students will be able to do at the end of the SLO Interval. The Learning Goal (objective) is based on and aligned with course- or grade-level content standards and curriculum. The goal should be broad enough to capture major content, but focused enough to be measurable.</p> <p>All students will demonstrate growth in their ability to collect and analyze scientific data.</p>	



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### VII. Standard (s)

Identify the content standard(s) and indicators that align to the SLO learning goal (objective).

This SLO is yearlong. This Student Learning Objective focuses specifically on how students collect and analyze scientific data.

Scientific Inquiry:

7.1.2 : Generate questions that can be answered through scientific investigation.

7.1.3 : Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.

7.1.4 : Explain the importance that repeated trials and a well- chosen sample size have with regard to the validity of a controlled scientific investigation.

7.1.5 : Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.

### VIII. Growth Targets

A. Choose One

Tiered

Individual

Targeted (*Sub population(s) of students are the focus of the SLO goal. Appropriate for course approach as a second SLO when the first includes all students.*)

B. Considering all available data, identify the targets the students are expected to reach by the end of the SLO interval. List the growth target information below or on an attached spreadsheet.

Students who earned a 1 or 2 will earn at least a 3 on the final. Students who earned 3 or 4 for baseline will earn a 3 or 4 on the final.

C. Provide a rationale for the growth targets. Rationale may reflect typical vs. pretest performance, may include reasoning for using individualized targets for some but not all students, or any other influencing information used to determine anticipated growth.

Our superintendent asked all science teachers to focus on science standards connected to mathematical concepts or skills because that is a major priority for growth in our district.

### IX. Instructional Strategies

A. Describe the best instructional practices you will use to teach this content to students. Include how instruction will be differentiated based on data. What interventions will be used if more assistance is needed during the learning progress?

I will group high and low performing students together so that lower-performing students can learn from higher-



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performing students in labs. I will also model data collection and analysis for each lab to emphasize its importance.

I will be reading "Teaching Science in Elementary and Middle School: A Project-based Approach" and utilizing ideas from the book.



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**DRAFT SLO WITH REVIEWER COMMENTS**

- This SLO serves as the Professional Growth and Development Plan (Section I only)
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**Section I. SLO**

<b>Teacher Name:</b> Sandra Casper	<b>Teacher School:</b> Model School District / Exemplary Middle School
<b>SLO Evaluator Name:</b> Andrew MacManus <b>SLO Evaluator Position/Role:</b> (Science Department Lead)	
<b>Grade Level:</b> 7	<b>SLO Content Area:</b> Science
<b>SLO Type:</b> <i>Choose One</i> <input checked="" type="checkbox"/> Individual <i>(written by an individual teacher)</i> <input type="checkbox"/> Team <i>(team of teachers focus on a similar goal but are held accountable for only their students)</i>	<b>SLO Approach:</b> <i>Choose One</i> <input checked="" type="checkbox"/> Class <i>(covers all of the students in one class period i.e., 2nd period Biology, 4th period Beginning Pottery, etc.)</i> <input type="checkbox"/> Course <i>(covers all of the students enrolled in multiple sections of the course (i.e., all of a teacher's Biology 2 students, all of a teacher's Beginning Pottery students, etc.)</i>
<b>SLO Interval of Instruction</b> <i>Choose One</i> <input checked="" type="checkbox"/> Year <input type="checkbox"/> Semester <input type="checkbox"/> Other  If <i>Other</i> , provide rationale (i.e. quarter long course) and indicate days of instruction.  <b>Rationale:</b> <a href="#">Click here to enter text.</a> <b>Days of Instruction:</b> 8/19/14 to 6/4/15	<b>Assessment Dates</b>  Pre Assessment Date: 9/10/14  Post Assessment Date: 5/6/15

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<p><b>I. Student Population</b> Provide a detailed description of the student population. Information should include, but is not limited to, the following: the number of students in the class, a description of students with exceptionalities (e.g., learning disability, gifted and talented, English language learner [ELL] status, etc.), and a description of academic supports provided to students (e.g., extended time, resource time with EC teacher, any classroom supports that students receive to help them access the core curriculum).</p> <p>All 7th grade science students (122)</p>
<p><b>II. Historical and Trend Data</b> Describe the applicable past data for the students. In your description included the students' level of knowledge prior to instruction, including the source(s) of data (e.g., formative and summative assessments, anecdotal data gathered from collaboration with other educators) and reflect on the relevance to the overall course objectives.</p>
<p><b>III. Baseline Data</b> Describe which pre-assessment(s) will be used to measure student learning and why the assessment is appropriate for measuring the objective(s). Provide baseline assessment results for the student population. Attach the assessment and grading scale and/or rubric used to score the assessment(s).</p> <ul style="list-style-type: none"> <li>• 33% of students earned a score of 1 on the baseline assignment.</li> <li>• 54% of students earned a score of 2 on the baseline assignment.</li> <li>• 5% of students earned a score of 3 on the baseline assignment.</li> </ul> <p>8% of students earned a score of 4 on the baseline assignment.</p>
<p><b>IV. Post Assessment</b> Indicate what assessment will be used as a post assessment and how it is aligned to the baseline assessment.</p> <p>Pre- and Post-assessments are the A and B versions of the final exam, in which students will answer multiple choice questions and write responses based on content knowledge. Students will also be expected to complete data collection and analysis in labs satisfactorily.</p>
<p><b>V. Progress Monitoring</b> How frequently will you progress monitor students' mastery of content? Indicate what ongoing sources of evidence you will collect in order to monitor student progress. (Other evidence of student growth can include student work samples, portfolios, etc.)</p> <p>I will monitor student learning by examining student progress on labs throughout the year. If students do not make adequate progress, I will require that they complete their independent inquiry project with my guidance and check-ins throughout the process to address challenges.</p>
<p><b>VI. Learning Goal (Objective)</b> Provide a description of what students will be able to do at the end of the SLO Interval. The Learning Goal (objective) is based on and aligned with course- or grade-level content standards and curriculum. The goal should be broad enough to capture major content, but focused enough to be measurable.</p> <p>All students will demonstrate growth in their ability to collect and analyze scientific data.</p>
<p><b>VII. Standard (s)</b> Identify the content standard(s) and indicators that align to the SLO learning goal (objective).</p> <p>This SLO is yearlong. This Student Learning Objective focuses specifically on how students collect and analyze scientific data.</p>

**Comment [LTM1]:** It's great that the SLO includes all your students. Please provide some additional information as its relevant: do you have any students with learning or behavior disabilities or challenges that have been documented? Are there any students facing significant challenges at home or in the community? Are there any students who have been identified as gifted and talented or that show a special aptitude or interest in science?

**Comment [LTM2]:** It's not clear here or in the assessment section what these scores mean. Can you elaborate on what these scores mean and how they were calculated?

See section II, historical and trend data. Is there any trend data you can cite? How have students performed on this exam in your past classes? How have these students performed on similar exams in previous science classes? Is there any other data that can describe how these students performed in the past or how similar students have performed in this course in the past?

**Comment [LTM3]:** It is great that you are including a written assessment and a performance-based assessment based on student work in the class. Does the exam focus only on data collection and analysis, or will you be focusing only on student performance on specific questions? How will student growth be measured on labs (not just proficiency) and what are the growth targets? How will these two assessments be used to set a single target?

**Comment [LTM4]:** It would be great if you had a method for tracking student progress, strengths, and weaknesses throughout the year based on these standards.

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**Scientific Inquiry:**

- 7.1.6 : Generate questions that can be answered through scientific investigation.
- 7.1.7 : Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.
- 7.1.8 : Explain the importance that repeated trials and a well- chosen sample size have with regard to the validity of a controlled scientific investigation.
- 7.1.9 : Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.

**Comment [LTM5]:** These standards make a great "set" and clearly align to the focus of the SLO. Are there aligned math standards that would be relevant to include?

**VIII. Growth Targets**

**D. Choose One**

- Tiered
- Individual
- Targeted (*Sub population(s) of students are the focus of the SLO goal. Appropriate for course approach as a second SLO when the first includes all students.*)

**E.** Considering all available data, identify the targets the students are expected to reach by the end of the SLO interval. List the growth target information below or on an attached spreadsheet.

Students who earned a 1 or 2 will earn at least a 3 on the final. Students who earned 3 or 4 for baseline will earn a 3 or 4 on the final.

**Comment [LTM6]:** This doesn't seem to show growth for the higher performing students. All students are expected to show growth. Please revise.

**F.** Provide a rationale for the growth targets. Rationale may reflect typical vs. pretest performance, may include reasoning for using individualized targets for some but not all students, or any other influencing information used to determine anticipated growth.

Our superintendent asked all science teachers to focus on science standards connected to mathematical concepts or skills because that is a major priority for growth in our district.

**Comment [LTM7]:** Can you say more about why you chose this focus instead of other math-based concepts? What is the expected outcome for your students – how will progress on these skills further their learning? How do you know the objective isn't too broad or narrow?

**IX. Instructional Strategies**

**A.** Describe the best instructional practices you will use to teach this content to students. Include how instruction will be differentiated based on data. What interventions will be used if more assistance is needed during the learning progress?

I will group high and low performing students together so that lower-performing students can learn from higher-performing students in labs. I will also model data collection and analysis for each lab to emphasize its importance.

I will be reading "Teaching Science in Elementary and Middle School: A Project-based Approach" and utilizing ideas from the book.

**Comment [LTM8]:** These are a good start for strategies. You may want to consider including some other strategies based on differentiated instruction, such as: having students with similar challenges work in a group with your assistance on a few specific tasks, providing leveled tasks that build in difficulty, etc. It might also be helpful to include a strategy like peer-review in the independent inquiry project so that students can help "check" each other's data collection and analysis.

**Comment [LTM9]:** What concepts from the book will you be focusing on and how will you be implementing them in your classroom? Are there any district-provided PD sessions you can attend? Are there any ways that you can learn from another teacher who is doing this well in his/her classroom?



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**FINAL SLO**

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**Section I. SLO**

<b>Teacher Name:</b> Sandra Casper	<b>Teacher School:</b> Model School District / Exemplary Middle School
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**I. Student Population**

Provide a detailed description of the student population. Information should include, but is not limited to, the following: the number of students in the class, a description of students with exceptionalities (e.g., learning disability, gifted and talented, English language learner [ELL] status, etc.), and a description of academic supports provided to students (e.g., extended time, resource time with EC teacher, any classroom supports that students receive to help them access the core curriculum).

All 7th grade science students (122). There are five students diagnosed with ADHD and one student with dyslexia. These students receive accommodations and should be able to meet through targets.

**II. Historical and Trend Data**

Describe the applicable past data for the students. In your description included the students' level of knowledge prior to instruction, including the source(s) of data (e.g., formative and summative assessments, anecdotal data gathered from collaboration with other educators) and reflect on the relevance to the overall course objectives.

We have not given the assessment as a pre-test in the past, but last year:

- 4% of students earned a score of 1 on the final exam.
- 16% of students earned a score of 2 on the final exam.
- 64% of students earned a score of 3 on the final exam.
- 16% of students earned a score of 4 on the final exam.

**III. Baseline Data**

Describe which pre-assessment(s) will be used to measure student learning and why the assessment is appropriate for measuring the objective(s). Provide baseline assessment results for the student population. Attach the assessment and grading scale and/or rubric used to score the assessment(s).

For the baseline assessment, students answered 20 questions on data collection and analysis processes, in which they had to identify logical steps and orders, guiding questions, and meaning based on data. A score of 1 indicates fewer than 5 questions correct, a score of 2 indicates 5-9 questions correct, a score of 3 indicates 10-14 questions correct, and a score of 4 indicates 15 or more questions correct.

- 33% of students earned a score of 1 on the final exam.
- 54% of students earned a score of 2 on the final exam
- 5% of students earned a score of 3 on the final exam.
- 8% of students earned a score of 4 on the final exam.

**IV. Post Assessment**

Indicate what assessment will be used as a post assessment and how it is aligned to the baseline assessment.

Pre- and Post-assessments are the A and B versions of the final exam, in which students will answer multiple choice questions and write responses based on content knowledge. Half the students will take exam A to assess beginning content knowledge and skills and the other half will take exam B. The groups will take the opposite version of the exam as their post-assessment. The exam has 60 questions, but the growth targets are based only on the 20 questions that address data collection and analysis directly.

Higher-performing students will also be expected to complete data collection and analysis in labs satisfactorily throughout the year if they maintain their score on the post- assessment.

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<b>V.</b>	<p><b>Progress Monitoring</b></p> <p>How frequently will you progress monitor students' mastery of content? Indicate what ongoing sources of evidence you will collect in order to monitor student progress. (Other evidence of student growth can include student work samples, portfolios, etc.)</p> <p>I will monitor student learning by examining student progress on labs throughout the year. All students will share their progress on their independent inquiry project with a "team" of other students and give each other suggestions, as well as present interim findings so I can address challenges as they arise. I will document student success and challenges on specific skills and standards throughout the year using excel.</p>
<b>VI.</b>	<p><b>Learning Goal (Objective)</b></p> <p>Provide a description of what students will be able to do at the end of the SLO Interval. The Learning Goal (objective) is based on and aligned with course- or grade-level content standards and curriculum. The goal should be broad enough to capture major content, but focused enough to be measurable.</p> <p>All students will demonstrate growth in their ability to collect and analyze scientific data.</p>
<b>VII.</b>	<p><b>Standard (s)</b></p> <p>Identify the content standard(s) and indicators that align to the SLO learning goal (objective).</p> <p>This SLO is yearlong. This Student Learning Objective focuses specifically on how students collect and analyze scientific data.</p> <p>Scientific Inquiry:</p> <p>7.1.2 : Generate questions that can be answered through scientific investigation.</p> <p>7.1.3 : Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.</p> <p>7.1.4: Explain the importance that repeated trials and a well- chosen sample size have with regard to the validity of a controlled scientific investigation.</p> <p>7.1.5: Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.</p> <p>For more information, see <a href="#">SC Science Standards document</a>. Math Process:</p> <p>7.1.2: Evaluate conjectures and pose follow-up questions to prove or disprove conjectures.</p> <p>7.1.6: Use correct and clearly written/spoken words, variables, and notation to communicate about significant mathematical tasks.</p> <p>For more information, see <a href="#">SC Math Standards document</a></p>
<b>VIII.</b>	<p><b>Growth Targets</b></p> <p><i>G. Choose One</i></p> <p><input type="checkbox"/> Tiered</p> <p><input type="checkbox"/> Individual</p> <p><input type="checkbox"/> Targeted (<i>Sub population(s) of students are the focus of the SLO goal. Appropriate for course approach as a second SLO when the first includes all students.</i>)</p>



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H. Considering all available data, identify the targets the students are expected to reach by the end of the SLO interval. List the growth target information below or on an attached spreadsheet.

Students who earned a 1 on the baseline: will earn a 2 or better on the final exam

Students who earned a 2 on the baseline: will earn a 3 or better on the final exam

Students who earned a 3 on the baseline: will earn a 3 on the final exam and average 90 percent or higher on data-related sections of labs throughout the year OR earn a 4 on the final exam

Students who earned a 4 on the baseline: will earn a 4 on the final exam and average 95 percent or higher on data-related sections of labs throughout the year

I. Provide a rationale for the growth targets. Rationale may reflect typical vs. pretest performance, may include reasoning for using individualized targets for some but not all students, or any other influencing information used to determine anticipated growth.

Our superintendent asked all science teachers to focus on science standards connected to mathematical concepts or skills because that is a major priority for growth in our district. Because data analysis and inquiry helps develop higher-order thinking skills and teachers students to think logically when problem-solving, this focus will help my students learn better in the future. The focus captures several related standards without being too broad.

### IX. Instructional Strategies

A. Describe the best instructional practices you will use to teach this content to students. Include how instruction will be differentiated based on data. What interventions will be used if more assistance is needed during the learning progress?

I will group high and low performing students together so that lower-performing students can learn from higher-performing students in labs, and will hold small-group learning sessions throughout the year to focus on building and refining specific skills with various levels of students. I will also model data collection and analysis for each lab to emphasize its importance.

I will be reading "Teaching Science in Elementary and Middle School: A Project-based Approach" and utilizing ideas from the book. I will select specific approaches to try teaching and will document their impact through reflection and student data. I will also ask an exemplary 8<sup>th</sup> grade science teacher from another school observe one of my classes if possible to give feedback on my instruction.