**Directions:** This professional development **planning template** is designed to assist educators as they learn to create Student Learning Objectives (SLOs). A complete SLO must include the information on **Learning Goals, Assessments, and Targets** found in the sections below. The recommended **Utah SLO Template** for district, school, and educator use is available at [http://schools.utah.gov](http://schools.utah.gov/cert/Educator-Effectiveness-Project/Resources.aspx). Educators may choose to use the **Utah SLO Template and SLO Development Guide** available at this site.

SMI Example: Linear and Exponential Functions

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| **Course/Grade Level Information** | |
| Course Name | Secondary Math I |
| Brief Course Description and Number of Students | For ninth grade students Secondary Math I deepens and extends the understanding of linear relationships, in part by contrasting them with exponential phenomena. |
| Grade Level(s) | Ninth Grade |

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| **Process, Implementation Timeline, and Sign-Offs** | |
| Names and current job positions of those developing this SLO |  |
| Administrator/Supervisor Name and Title |  |
| Administrator/Supervisor sign-off of beginning of year or semester SLO |  |
| Date final SLO is due to determine educator effectiveness rating |  |

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| **Section 1: Establish a Learning Goal:** Write your proposed **Learning Goal**. Then thoroughly complete the planning information. The planning information is used to guide the **SMART** review process. Finalize your **Learning Goal** (as needed) once you have completed the **SMART** review. |
| **SMART Review:**  Use this protocol to determine alignment of the SLO **Learning Goal**. |
| **Specific** – Learning Goal is focused on the big idea and Utah Core content standards.  **Measurable** – Learning Goal is able to be appropriately and adequately assessed (note the Assessments section below will identify the specific assessment to be used).  **Appropriate –** Learning Goal is within the educator’s control to affect change and is important and meaningful for students to learn during the identified time span.  **Realistic –** Learning Goal, while ambitious, is achievable for both educators and students, during the time span identified.  **Time Limited** **–** Learning Goal can be evaluated within the time span under the educator’s control. |

| **A Learning Goal** describes what students will be able to do at the end of the course or grade based on course or grade-level Utah Core content standards and curriculum. | |
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| **Proposed SLO Learning Goal** | |
| Write the *proposed* SLO **Learning Goal,** and then complete the planning information. | Students will represent relationships by expressing the key features in both linear and exponential functions. |
| **Planning Information for Writing the Learning Goal** | |
| Identify the *big ide*a supported by the Learning Goal. | Extend students’ understanding of the definition of a function in order to interpret, analyze, and build linear and exponential functions. |
| List all *Utah Core* content standards that are associated with this big idea, (include the text and code of the standards). | Focus:  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.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.IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).  F.BF.1 Write a function that describes a relationship between two quantities.  F.BF.3 Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), f(kx) , and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.  S.ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.  Support:  S.ID.8 Compute (using technology) and interpret the correlation coefficient of a linear fit.  F.LE.2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).  A.REI.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. |
| Explain why the Learning Goal is important and meaningful for students to learn. | Students will benefit from the ability to recognize linear and exponential relationships in real life situations by using functions and formulas to solve problems with modeling and identifying key features as an aid in solving problems. |
| Describe how the Learning Goal requires students to demonstrate deep understanding of the knowledge and skills of the standards and big idea being measured. | *DOK’s below were obtained using Hess’s Depth of Knowledge Chart*  DOK 2: Apply by translating between representations of linear and exponential functions. Analyze by comparing and contrasting key features of linear and exponential functions.  DOK 3: Apply by using concepts of linear and exponential functions to solve real life problems. Analyze functions by generalizing patterns of linear rates of change, exponential rates of change and other rates of change. |
| Being specific to the different aspects of the Learning Goal, describe the instruction and strategies that will be used to teach the Learning Goal. | Teachers will use the Eight Teaching Practices, (including goals, tasks, representations, discourse, questioning, building procedural fluency from conceptual understanding, supporting productive struggle and using evidence of student thinking) to engage students with the Standards for Mathematical Practice. Instructional strategies will help students develop and solidify a conceptual understanding of modeling a situation involving linear and exponential functions and build procedural fluency of writing linear and exponential functions. |
| Identify the *time span* for teaching the Learning Goal (e.g., daily class - 45 minutes, two days a week for the entire school year, weekly units). | This learning goal occurs over the entire course with specific instruction in numerous units in the course. |
| Explain how this time span is appropriate and sufficient for teaching the Learning Goal. | This learning goal covers an extensive amount of standards found in Secondary Math 1. Instructors will strive to make connections between standards. |
| **Final SLO Learning Goal** | |
| From the SMART review above, finalize the **SLO** **Learning Goal**. | Students will recognize linear and exponential relationships in multiple representations, identify key features, and use that understanding of functions to solve problems. |

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| **Section 2: Document Assessment(s) and Scoring:** Use the planning information below to develop and tailor the description and use of **Assessment(s) and Scoring.** | |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| **Planning Information for Determining Assessment(s) and Scoring** | |
| Explain how student performance is defined and scored using the chosen **Assessment(s)**. Include the specific **scoring rubric(s)** and/orcriteria to be used. | Pre-assessment data will include foundational concepts as well as the content of this learning goal.  Data will determine students understanding of:   * Definition of a function * Knowledge of representing linear and exponential functions graphically and with a table. * Understanding of key features of linear and exponential functions.   Teachers will look for natural breaks in baseline data to separate performance into 3 groups to determine the adequate progress of each group. |
| Describe **how often** you will collect data to **monitor** student progress toward the Learning Goal. | Ongoing progress monitoring by assessing students’ understanding of linear and exponential functions, their key features and their application, using various assessment tools after specific units addressing these concepts. |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| Explain how you will use this information to **differentiate instruction for all students** toward the Learning Goal (e.g., gifted and talented, ELL, special education). | Instruction will be adjusted based on pre assessment and ongoing progress monitoring. Strategies may include: individualized teacher and peer tutoring, groupings with more advanced students, tier 2 instruction, and provide enrichment opportunities. |
| **Assessment(s)** **for the SLO** | |
| Identify what **proficiency** looks like to meet the Learning Goal. | High proficient students will demonstrate a complete understanding of similarities and differences between linear and exponential functions including the use of key features in the comparisons.  Medium proficient students will demonstrate a partial understanding of similarities or differences between linear and exponential functions by recognizing the differences, but may not be able to explain how the key features determine those differences.  Low proficient students will not meet the medium requirements. |
| Describe the **Assessment(s)** (i.e., performance tasks and their corresponding **scoring rubrics)** that measure the level of students’ proficiency toward the Learning Goal[[1]](#footnote-1). | Students will have opportunities through short tasks to compare linear and exponential functions. The students will explore the differences and similarities using different representations and by identifying key features.  Example:  Given a linear and exponential graph, compare and contrast the intercepts. |

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| **Section 3: Establish Targets:** Use the planning information below to guide you to establish SLO **Targets**. | |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| **Planning Information for setting Targets used to establish Educator Evaluation Ratings** | |
| Describe the courses, past assessments, and/or experiences used to establish **baseline data** that will inform expected Target outcomes for students’ understanding of the Learning Goal. | Baseline Data:  Pre-assessment  Previous Sage Data  Current Student Grades |
| Identify the **past performance** (e.g., grades, test scores, etc.) of students in the identified courses, assessments, or other sources of information to **categorize student levels** **as** **starting points** prior to instruction and learning. | Starting Points: |
| **Expected SLO Targets** | |
| Using students’ starting points, identify the **number or percentage of students** **expected** for each **Target** group based on available data about their performance. Include any appropriate subgroups. | Expected Growth: |
| Describe the **high, average, and low** levels of growth and proficiency required for students to be placed within the **expected targeted groups**. | Proficiency Levels: |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| Explain how these **Target outcomes** demonstrate ambitious, yet realistic growth for measuring students’ **understanding of and progress toward** proficiency of the Learning Goal. | Rationale for Expected Growth: |
| **Adapted SLO Targets (as needed based on Mid-Instructional Period Conference)** | |
| If **SLO Targets** are adjusted, list revised Targets for end of instructional period Learning Goal. | Revised Targets: |

**Directions:** Complete this section at the end of the instructional period (i.e., year, semester, course, grade level). This section records the final outcomes for your SLO **Targets**.

| **Actual Outcomes for Targets:** Record the actual outcomes at the end of the instructional period for the whole class as well as for different subgroups, as appropriate. | |
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| Record the **actual** **number or percentage** of students who achieved the **Targets** set in the section above at the beginning of the instructional period. Include any appropriate subgroups as noted above. | Actual Outcomes: |
| Provide any comments you wish to include about actual **Target** outcomes, student progress, growth, and proficiency levels. | |

**Establish Educator Ratings**: Use the table below to review the SLO with the administrator/ supervisor and document the educator rating based on the established **Learning Goal, Assessment(s), and Targets**.

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| **Educator Ratings:** Educator rating results are based on the **SLO Targets.** | | | | |
| **Does Not Meet**  Based on the students’ starting points, students performed worse than expected. | | **Partially Meets**  Based on the students’ starting points, students partially performed as expected. | **Meets**  Based on the students’ starting points, students performed as expected. | **Exceeds**  Based on the students’ starting points, students performed better than expected. |
| Administrator/Supervisor comments: | | | | |
| Date | Administrator/ Supervisor Signature | | | |
| Date | Educator Signature  (the signature does not necessarily indicate agreement with the rating) | | | |

8th Grade Example: Linear Functions – Multiple Representations

**Directions:** This professional development **planning template** is designed to assist educators as they learn to create Student Learning Objectives (SLOs). A complete SLO must include the information on **Learning Goals, Assessments, and Targets** found in the sections below. The recommended **Utah SLO Template** for district, school, and educator use is available at [http://schools.utah.gov](http://schools.utah.gov/cert/Educator-Effectiveness-Project/Resources.aspx). Educators may choose to use the **Utah SLO Template and SLO Development Guide** available at this site.

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| **Course/Grade Level Information** | |
| Course Name | Math 8 |
| Brief Course Description and Number of Students |  |
| Grade Level(s) | Grade Eight |

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| **Process, Implementation Timeline, and Sign-Offs** | |
| Names and current job positions of those developing this SLO |  |
| Administrator/Supervisor Name and Title |  |
| Administrator/Supervisor sign-off of beginning of year or semester SLO |  |
| Date final SLO is due to determine educator effectiveness rating |  |

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| **Section 1: Establish a Learning Goal:** Write your proposed **Learning Goal**. Then thoroughly complete the planning information. The planning information is used to guide the **SMART** review process. Finalize your **Learning Goal** (as needed) once you have completed the **SMART** review. |
| **SMART Review:**  Use this protocol to determine alignment of the SLO **Learning Goal**. |
| **Specific** – Learning Goal is focused on the big idea and Utah Core content standards.  **Measurable** – Learning Goal is able to be appropriately and adequately assessed (note the Assessments section below will identify the specific assessment to be used).  **Appropriate –** Learning Goal is within the educator’s control to affect change and is important and meaningful for students to learn during the identified time span.  **Realistic –** Learning Goal, while ambitious, is achievable for both educators and students, during the time span identified.  **Time Limited** **–** Learning Goal can be evaluated within the time span under the educator’s control. |

| **A Learning Goal** describes what students will be able to do at the end of the course or grade based on course or grade-level Utah Core content standards and curriculum. | |
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| **Proposed SLO Learning Goal** | |
| Write the *proposed* SLO **Learning Goal,** and then complete the planning information. | Students will create and utilize multiple representations to understand and identify the equation of a line, not through the origin, to describe real – world situations. |
| **Planning Information for Writing the Learning Goal** | |
| Identify the *big ide*a supported by the Learning Goal. | Linear Functions |
| List all *Utah Core* content standards that are associated with this big idea, (include the text and code of the standards). | Focus:  8.SP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.  8.SP.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.  8.SP.3: Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.  8.F.1: Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.  8.F.2: Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).  8.F.3: Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.  8.F.4: Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.  8.EE.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.  Support:  8.EE.6: Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y – mx + b for a line intercepting the vertical axis at b.  8.EE.7a: Solve linear equations in one variable. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the for x = a, a = a, or a = b results (where a and b are different numbers)  8.EE.8: Analyze and solve pairs of simultaneous linear equations.  a) Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.  b) Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.  c) Solve real-world and mathematical problems leading to two linear equations in two variables. |
| Explain why the Learning Goal is important and meaningful for students to learn. | Students need to be able to understand linear functions as a prerequisite to other functions to be college and career ready and recognize situations for appropriate use. |
| Describe how the Learning Goal requires students to demonstrate deep understanding of the knowledge and skills of the standards and big idea being measured. | *DOK’s below were obtained using Hess’s Depth of Knowledge Chart*  DOK 2: Translate between mathematical representations for linear functions.  DOK 3: Translate between problem situation and the linear function that models the situation. |
| Being specific to the different aspects of the Learning Goal, describe the instruction and strategies that will be used to teach the Learning Goal. | Teachers will use the Eight Teaching Practices, (including goals, tasks, representations, discourse, questioning, building procedural fluency from conceptual understanding, supporting productive struggle and using evidence of student thinking) to engage students with the Standards for Mathematical Practice. Instructional strategies will help students develop and solidify a conceptual understanding and build procedural fluency of creating and using multiple representations of linear functions to describe real-world situations. |
| Identify the *time span* for teaching the Learning Goal (e.g., daily class - 45 minutes, two days a week for the entire school year, weekly units). | This learning goal would cover 1 year of instruction. |
| Explain how this time span is appropriate and sufficient for teaching the Learning Goal. | This learning goal covers an extensive amount of standards found in 8th grade. Instructors will strive to make connections between all math content areas. |
| **Final SLO Learning Goal** | |
| From the SMART review above, finalize the **SLO** **Learning Goal**. | Students will create and utilize multiple representations to understand and identify the equation of a line, not through the origin, to describe real – world situations. |

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| **Section 2: Document Assessment(s) and Scoring:** Use the planning information below to develop and tailor the description and use of **Assessment(s) and Scoring.** | |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| **Planning Information for Determining Assessment(s) and Scoring** | |
| Explain how student performance is defined and scored using the chosen **Assessment(s)**. Include the specific **scoring rubric(s)** and/orcriteria to be used. | Pre-assessment data will include foundational concepts as well as the content of this learning goal.  Data will determine students understanding of linear equations not going through the origin and recognizing its relationship to proportional relations. Pre-assessment will also measure students’ abilities to move fluently between the linear representations.  Teachers will look for natural breaks in baseline data to separate performance into 3 groups to determine the adequate progress of each group. |
| Describe **how often** you will collect data to **monitor** student progress toward the Learning Goal. | Frequent and ongoing progress monitoring by:  Exit notes  Student questioning  Weekly quizzes  Bell quizzes  Unit assessments  Skill Checks  Etc… |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| Explain how you will use this information to **differentiate instruction for all students** toward the Learning Goal (e.g., gifted and talented, ELL, special education). | Instruction will be adjusted based on pre assessment and ongoing progress monitoring. Strategies may include: individualized teacher and peer tutoring, groupings with more advanced students, tier 2 instruction, and provide enrichment opportunities. |
| **Assessment(s)** **for the SLO** | |
| Identify what **proficiency** looks like to meet the Learning Goal. | Proficient students will be able to write the other representations of linear equations given one of the representations including a real world situation.  High: Students will be able to move fluently among the representations of diagram models, equations, graphs, tables, and real-world situations.  Medium: Students will be able to move with support among the representations.  Low: These students were unable to show sufficient growth to reach the medium proficiency. |
| Describe the **Assessment(s)** (i.e., performance tasks and their corresponding **scoring rubrics)** that measure the level of students’ proficiency toward the Learning Goal[[2]](#footnote-2). | The assessment will be a series of short tasks allowing students the opportunity to move among the representations of linear function.  Examples:   1. Given the linear equation complete the other representations. 2. Given the table of a linear relation complete the other representations.   Use the following rubric for scoring student performance on investigative task and written responses to short answer questions. For this Rubric: High – 4, Medium – 2, 3, Low – 0, 1.  **Macintosh HD:Users:davidspencer:Desktop:Screen Shot 2015-02-20 at 11.50.54 AM.png**  **Macintosh HD:Users:davidspencer:Desktop:Screen Shot 2015-02-20 at 11.51.24 AM.png** |

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| **Section 3: Establish Targets:** Use the planning information below to guide you to establish SLO **Targets**. | |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| **Planning Information for setting Targets used to establish Educator Evaluation Ratings** | |
| Describe the courses, past assessments, and/or experiences used to establish **baseline data** that will inform expected Target outcomes for students’ understanding of the Learning Goal. | Baseline Data:  Pre-assessment  Previous Sage Data  Current Student Grades |
| Identify the **past performance** (e.g., grades, test scores, etc.) of students in the identified courses, assessments, or other sources of information to **categorize student levels** **as** **starting points** prior to instruction and learning. | Starting Points: |
| **Expected SLO Targets** | |
| Using students’ starting points, identify the **number or percentage of students** **expected** for each **Target** group based on available data about their performance. Include any appropriate subgroups. | Expected Growth: |
| Describe the **high, average, and low** levels of growth and proficiency required for students to be placed within the **expected targeted groups**. | Proficiency Levels: |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| Explain how these **Target outcomes** demonstrate ambitious, yet realistic growth for measuring students’ **understanding of and progress toward** proficiency of the Learning Goal. | Rationale for Expected Growth: |
| **Adapted SLO Targets (as needed based on Mid-Instructional Period Conference)** | |
| If **SLO Targets** are adjusted, list revised Targets for end of instructional period Learning Goal. | Revised Targets: |

**Directions:** Complete this section at the end of the instructional period (i.e., year, semester, course, grade level). This section records the final outcomes for your SLO **Targets**.

| **Actual Outcomes for Targets:** Record the actual outcomes at the end of the instructional period for the whole class as well as for different subgroups, as appropriate. | |
| --- | --- |
| Record the **actual** **number or percentage** of students who achieved the **Targets** set in the section above at the beginning of the instructional period. Include any appropriate subgroups as noted above. | Actual Outcomes: |
| Provide any comments you wish to include about actual **Target** outcomes, student progress, growth, and proficiency levels. | |

**Establish Educator Ratings**: Use the table below to review the SLO with the administrator/ supervisor and document the educator rating based on the established **Learning Goal, Assessment(s), and Targets**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Educator Ratings:** Educator rating results are based on the **SLO Targets.** | | | | |
| **Does Not Meet**  Based on the students’ starting points, students performed worse than expected. | | **Partially Meets**  Based on the students’ starting points, students partially performed as expected. | **Meets**  Based on the students’ starting points, students performed as expected. | **Exceeds**  Based on the students’ starting points, students performed better than expected. |
| Administrator/Supervisor comments: | | | | |
| Date | Administrator/ Supervisor Signature | | | |
| Date | Educator Signature  (the signature does not necessarily indicate agreement with the rating) | | | |

**Directions:** This professional development **planning template** is designed to assist educators as they learn to create Student Learning Objectives (SLOs). A complete SLO must include the information on **Learning Goals, Assessments, and Targets** found in the sections below. The recommended **Utah SLO Template** for district, school, and educator use is available at [http://schools.utah.gov](http://schools.utah.gov/cert/Educator-Effectiveness-Project/Resources.aspx). Educators may choose to use the **Utah SLO Template and SLO Development Guide** available at this site.

8th Grade Example: Rigid Transformations

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| --- | --- |
| **Course/Grade Level Information** | |
| Course Name | Math 8 |
| Brief Course Description and Number of Students |  |
| Grade Level(s) | Grade 8 |

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| **Process, Implementation Timeline, and Sign-Offs** | |
| Names and current job positions of those developing this SLO |  |
| Administrator/Supervisor Name and Title |  |
| Administrator/Supervisor sign-off of beginning of year or semester SLO |  |
| Date final SLO is due to determine educator effectiveness rating |  |

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| **Section 1: Establish a Learning Goal:** Write your proposed **Learning Goal**. Then thoroughly complete the planning information. The planning information is used to guide the **SMART** review process. Finalize your **Learning Goal** (as needed) once you have completed the **SMART** review. |
| **SMART Review:**  Use this protocol to determine alignment of the SLO **Learning Goal**. |
| **Specific** – Learning Goal is focused on the big idea and Utah Core content standards.  **Measurable** – Learning Goal is able to be appropriately and adequately assessed (note the Assessments section below will identify the specific assessment to be used).  **Appropriate –** Learning Goal is within the educator’s control to affect change and is important and meaningful for students to learn during the identified time span.  **Realistic –** Learning Goal, while ambitious, is achievable for both educators and students, during the time span identified.  **Time Limited** **–** Learning Goal can be evaluated within the time span under the educator’s control. |

| **A Learning Goal** describes what students will be able to do at the end of the course or grade based on course or grade-level Utah Core content standards and curriculum. | |
| --- | --- |
| **Proposed SLO Learning Goal** | |
| Write the *proposed* SLO **Learning Goal,** and then complete the planning information. | Students will understand the effects translations, rotations, reflections, and dilations have on angles and distances within two-dimensional figures. |
| **Planning Information for Writing the Learning Goal** | |
| Identify the *big ide*a supported by the Learning Goal. | Preservation of distance and angles under translations, rotations, and reflections. Also, under dilation angles are preserved while distance is not. |
| List all *Utah Core* content standards that are associated with this big idea, (include the text and code of the standards). | Focus:  8.G.A.3: Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.  8.G.A.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.  8.G.B.8: Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.  8.F.A.2: Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*  Support:  8.EE.B.6: Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.  8.G.A.4: Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.  8.G.B.7: Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.  8.EE.B.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.* |
| Explain why the Learning Goal is important and meaningful for students to learn. | Students need to be able to apply mathematical understanding to be college and career ready and recognize situations for appropriate use. |
| Describe how the Learning Goal requires students to demonstrate deep understanding of the knowledge and skills of the standards and big idea being measured. | *DOK’s below were obtained using Hess’s Depth of Knowledge Chart*  DOK 2: Select different and translate between representations to identify congruence or similarity. Construct models given criteria.  DOK 3: Compare information within the different representations to determine if the figures are congruent. Analyze and draw conclusions from different representations to site evidence. |
| Being specific to the different aspects of the Learning Goal, describe the instruction and strategies that will be used to teach the Learning Goal. | Teachers will use the Eight Teaching Practices, (including goals, tasks, representations, discourse, questioning, building procedural fluency from conceptual understanding, supporting productive struggle and using evidence of student thinking) to engage students with the Standards for Mathematical Practice. Instructional strategies will help students develop and solidify a conceptual understanding and build procedural fluency of performing the rigid transformations and calculating the distance between two points. |
| Identify the *time span* for teaching the Learning Goal (e.g., daily class - 45 minutes, two days a week for the entire school year, weekly units). | This SLO would cover the second semester of instruction. |
| Explain how this time span is appropriate and sufficient for teaching the Learning Goal. | This is to allow time for explorations, investigations, justifications, etc… prior to solidification of learning goal. |
| **Final SLO Learning Goal** | |
| From the SMART review above, finalize the **SLO** **Learning Goal**. | Students will understand the effects translations, rotations, reflections, and dilations have on angles and distances within two-dimensional figures. This will strengthen ideas about congruence and similarity through multiple representations (graphically, algebraically, and geometrically). |

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| **Section 2: Document Assessment(s) and Scoring:** Use the planning information below to develop and tailor the description and use of **Assessment(s) and Scoring.** | |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| **Planning Information for Determining Assessment(s) and Scoring** | |
| Explain how student performance is defined and scored using the chosen **Assessment(s)**. Include the specific **scoring rubric(s)** and/orcriteria to be used. | Pre-assessment data will include foundational concepts as well as the content of this learning goal.  Data will determine students understanding of transformations. Pre-assessment will also measure students’ abilities to move fluently between the different representations.  Teachers will look for natural breaks on pre-assessment scores to separate performance into 3 groups to determine the adequate progress of each group. |
| Describe **how often** you will collect data to **monitor** student progress toward the Learning Goal. | Frequent and ongoing progress monitoring by: (This is a suggested list)  Exit notes  Student questioning  Weekly tasks  Bell quizzes  Unit assessments  Skill Checks  Etc… |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| Explain how you will use this information to **differentiate instruction for all students** toward the Learning Goal (e.g., gifted and talented, ELL, special education). | Instruction will be adjusted based on pre assessment and ongoing progress monitoring. Strategies may include: individualized teacher and peer tutoring, groupings with more advanced students, tier 2 instruction, and provide enrichment opportunities. (Suggestions) |
| **Assessment(s)** **for the SLO** | |
| Identify what **proficiency** looks like to meet the Learning Goal. | Based on pre-assessment data, proficiency for each level follows:  High: These students are able to utilize their tables, graphs, and equations to justify when two shapes are similar or congruent.  Medium: These students are able to recognize when two shapes are congruent or similar. Students have emerging justifications.  Low: These students were unable to show sufficient growth to reach the medium proficiency. |
| Describe the **Assessment(s)** (i.e., performance tasks and their corresponding **scoring rubrics)** that measure the level of students’ proficiency toward the Learning Goal[[3]](#footnote-3). | The assessment will be a series of short tasks representative of the learning goal.  Examples: Use the following rubric for scoring student performance on investigative task and written responses to short answer questions. For this Rubric: High – 4, Medium – 2, 3, Low – 0, 1.  **Macintosh HD:Users:davidspencer:Desktop:Screen Shot 2015-02-20 at 11.50.54 AM.png**  **Macintosh HD:Users:davidspencer:Desktop:Screen Shot 2015-02-20 at 11.51.24 AM.png** |

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| **Section 3: Establish Targets:** Use the planning information below to guide you to establish SLO **Targets**. | |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| **Planning Information for setting Targets used to establish Educator Evaluation Ratings** | |
| Describe the courses, past assessments, and/or experiences used to establish **baseline data** that will inform expected Target outcomes for students’ understanding of the Learning Goal. | Baseline Data:  Pre-assessment  Previous Sage Data  Current Student Grades |
| Identify the **past performance** (e.g., grades, test scores, etc.) of students in the identified courses, assessments, or other sources of information to **categorize student levels** **as** **starting points** prior to instruction and learning. | Starting Points: |
| **Expected SLO Targets** | |
| Using students’ starting points, identify the **number or percentage of students** **expected** for each **Target** group based on available data about their performance. Include any appropriate subgroups. | Expected Growth: |
| Describe the **high, average, and low** levels of growth and proficiency required for students to be placed within the **expected targeted groups**. | Proficiency Levels: |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| Explain how these **Target outcomes** demonstrate ambitious, yet realistic growth for measuring students’ **understanding of and progress toward** proficiency of the Learning Goal. | Rationale for Expected Growth: |
| **Adapted SLO Targets (as needed based on Mid-Instructional Period Conference)** | |
| If **SLO Targets** are adjusted, list revised Targets for end of instructional period Learning Goal. | Revised Targets: |

**Directions:** Complete this section at the end of the instructional period (i.e., year, semester, course, grade level). This section records the final outcomes for your SLO **Targets**.

| **Actual Outcomes for Targets:** Record the actual outcomes at the end of the instructional period for the whole class as well as for different subgroups, as appropriate. | |
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| Record the **actual** **number or percentage** of students who achieved the **Targets** set in the section above at the beginning of the instructional period. Include any appropriate subgroups as noted above. | Actual Outcomes: |
| Provide any comments you wish to include about actual **Target** outcomes, student progress, growth, and proficiency levels. | |

**Establish Educator Ratings**: Use the table below to review the SLO with the administrator/ supervisor and document the educator rating based on the established **Learning Goal, Assessment(s), and Targets**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Educator Ratings:** Educator rating results are based on the **SLO Targets.** | | | | |
| **Does Not Meet**  Based on the students’ starting points, students performed worse than expected. | | **Partially Meets**  Based on the students’ starting points, students partially performed as expected. | **Meets**  Based on the students’ starting points, students performed as expected. | **Exceeds**  Based on the students’ starting points, students performed better than expected. |
| Administrator/Supervisor comments: | | | | |
| Date | Administrator/ Supervisor Signature | | | |
| Date | Educator Signature  (the signature does not necessarily indicate agreement with the rating) | | | |

Blank Template with suggestions for text!

**Directions:** This professional development **planning template** is designed to assist educators as they learn to create Student Learning Objectives (SLOs). A complete SLO must include the information on **Learning Goals, Assessments, and Targets** found in the sections below. The recommended **Utah SLO Template** for district, school, and educator use is available at [http://schools.utah.gov](http://schools.utah.gov/cert/Educator-Effectiveness-Project/Resources.aspx). Educators may choose to use the **Utah SLO Template and SLO Development Guide** available at this site.

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| **Course/Grade Level Information** | |
| Course Name |  |
| Brief Course Description and Number of Students |  |
| Grade Level(s) |  |

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| --- | --- |
| **Process, Implementation Timeline, and Sign-Offs** | |
| Names and current job positions of those developing this SLO |  |
| Administrator/Supervisor Name and Title |  |
| Administrator/Supervisor sign-off of beginning of year or semester SLO |  |
| Date final SLO is due to determine educator effectiveness rating |  |

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| **Section 1: Establish a Learning Goal:** Write your proposed **Learning Goal**. Then thoroughly complete the planning information. The planning information is used to guide the **SMART** review process. Finalize your **Learning Goal** (as needed) once you have completed the **SMART** review. |
| **SMART Review:**  Use this protocol to determine alignment of the SLO **Learning Goal**. |
| **Specific** – Learning Goal is focused on the big idea and Utah Core content standards.  **Measurable** – Learning Goal is able to be appropriately and adequately assessed (note the Assessments section below will identify the specific assessment to be used).  **Appropriate –** Learning Goal is within the educator’s control to affect change and is important and meaningful for students to learn during the identified time span.  **Realistic –** Learning Goal, while ambitious, is achievable for both educators and students, during the time span identified.  **Time Limited** **–** Learning Goal can be evaluated within the time span under the educator’s control. |

| **A Learning Goal** describes what students will be able to do at the end of the course or grade based on course or grade-level Utah Core content standards and curriculum. | |
| --- | --- |
| **Proposed SLO Learning Goal** | |
| Write the *proposed* SLO **Learning Goal,** and then complete the planning information. | Students will… |
| **Planning Information for Writing the Learning Goal** | |
| Identify the *big ide*a supported by the Learning Goal. | Grain size of critical area |
| List all *Utah Core* content standards that are associated with this big idea, (include the text and code of the standards). | Focus:  Copy and paste state standard here…  Support:  Copy and paste supporting state standards, standards of math practice, etc. here… |
| Explain why the Learning Goal is important and meaningful for students to learn. | Students … |
| Describe how the Learning Goal requires students to demonstrate deep understanding of the knowledge and skills of the standards and big idea being measured. | *DOK’s below were obtained using Hess’s Depth of Knowledge Chart*  DOK 2: use verbs from Bloom’s specify based on learning goal.  DOK 3: use verbs from Bloom’s specify based on learning goal. |
| Being specific to the different aspects of the Learning Goal, describe the instruction and strategies that will be used to teach the Learning Goal. | Teachers will use the Eight Teaching Practices, (including goals, tasks, representations, discourse, questioning, building procedural fluency from conceptual understanding, supporting productive struggle and using evidence of student thinking) to engage students with the Standards for Mathematical Practice. Instructional strategies will help students develop and solidify a conceptual understanding and build procedural fluency of … |
| Identify the *time span* for teaching the Learning Goal (e.g., daily class - 45 minutes, two days a week for the entire school year, weekly units). | This learning goal occurs (during the entire course, in the first semester, etc). |
| Explain how this time span is appropriate and sufficient for teaching the Learning Goal. | This learning goal covers an extensive amount of standards found in \_\_\_\_\_\_ grade. Instructors will strive to make connections between standards. |
| **Final SLO Learning Goal** | |
| From the SMART review above, finalize the **SLO** **Learning Goal**. | Students will… |

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| **Section 2: Document Assessment(s) and Scoring:** Use the planning information below to develop and tailor the description and use of **Assessment(s) and Scoring.** | |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| **Planning Information for Determining Assessment(s) and Scoring** | |
| Explain how student performance is defined and scored using the chosen **Assessment(s)**. Include the specific **scoring rubric(s)** and/orcriteria to be used. | Pre-assessment data will include foundational concepts as well as the content of this learning goal.  Data will determine students understanding of linear equation going through the origin and recognizing its relationship to proportional relations. Pre-assessment will also measure students’ abilities to move fluently between the linear representations.  Teachers will look for natural breaks on pre-assessment scores to separate performance into 3 groups to determine the adequate progress of each group. |
| Describe **how often** you will collect data to **monitor** student progress toward the Learning Goal. | Frequent and ongoing progress monitoring by: (This is a suggested list)  Exit notes  Student questioning  Weekly tasks  Bell quizzes  Unit assessments  Skill Checks  Etc… |
| **Assessments** are standards-based, of high quality, and designed to best measure the knowledge and skills found in the SLO Learning Goal. **Assessments** should be accompanied by clear criteria or scoring rubrics to describe the level at which students have learned. | |
| Explain how you will use this information to **differentiate instruction for all students** toward the Learning Goal (e.g., gifted and talented, ELL, special education). | Instruction will be adjusted based on pre assessment and ongoing progress monitoring. Strategies may include: individualized teacher and peer tutoring, groupings with more advanced students, tier 2 instruction, and provide enrichment opportunities. (Suggestions) |
| **Assessment(s)** **for the SLO** | |
| Identify what **proficiency** looks like to meet the Learning Goal. | Based on pre-assessment data, proficiency for each level follows:  High: Student will be able to write the other representations of linear equations given one of the representations and apply them to real-world situations.  Medium: Students will…  Low: These students were unable to show sufficient growth to reach the medium proficiency. |
| Describe the **Assessment(s)** (i.e., performance tasks and their corresponding **scoring rubrics)** that measure the level of students’ proficiency toward the Learning Goal[[4]](#footnote-4). | The assessment will be a series of short tasks representative of the learning goal.  Examples:   1. Given the linear equation complete the other 3 representations. 2. Given the table of a linear equation complete the other 3 representations. |

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| **Section 3: Establish Targets:** Use the planning information below to guide you to establish SLO **Targets**. | |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| **Planning Information for setting Targets used to establish Educator Evaluation Ratings** | |
| Describe the courses, past assessments, and/or experiences used to establish **baseline data** that will inform expected Target outcomes for students’ understanding of the Learning Goal. | Baseline Data:  Pre-assessment  Previous Sage Data  Current Student Grades |
| Identify the **past performance** (e.g., grades, test scores, etc.) of students in the identified courses, assessments, or other sources of information to **categorize student levels** **as** **starting points** prior to instruction and learning. | Starting Points: |
| **Expected SLO Targets** | |
| Using students’ starting points, identify the **number or percentage of students** **expected** for each **Target** group based on available data about their performance. Include any appropriate subgroups. | Expected Growth: |
| Describe the **high, average, and low** levels of growth and proficiency required for students to be placed within the **expected targeted groups**. | Proficiency Levels: |
| **Targets** are used to effectively project levels of proficiency toward the Learning Goal. Identify the expected student learning outcomes by the end of the instructional period for the whole class as well as for different student subgroups, as appropriate. | |
| Explain how these **Target outcomes** demonstrate ambitious, yet realistic growth for measuring students’ **understanding of and progress toward** proficiency of the Learning Goal. | Rationale for Expected Growth: |
| **Adapted SLO Targets (as needed based on Mid-Instructional Period Conference)** | |
| If **SLO Targets** are adjusted, list revised Targets for end of instructional period Learning Goal. | Revised Targets: |

**Directions:** Complete this section at the end of the instructional period (i.e., year, semester, course, grade level). This section records the final outcomes for your SLO **Targets**.

| **Actual Outcomes for Targets:** Record the actual outcomes at the end of the instructional period for the whole class as well as for different subgroups, as appropriate. | |
| --- | --- |
| Record the **actual** **number or percentage** of students who achieved the **Targets** set in the section above at the beginning of the instructional period. Include any appropriate subgroups as noted above. | Actual Outcomes: |
| Provide any comments you wish to include about actual **Target** outcomes, student progress, growth, and proficiency levels. | |

**Establish Educator Ratings**: Use the table below to review the SLO with the administrator/ supervisor and document the educator rating based on the established **Learning Goal, Assessment(s), and Targets**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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| Administrator/Supervisor comments: | | | | |
| Date | Administrator/ Supervisor Signature | | | |
| Date | Educator Signature  (the signature does not necessarily indicate agreement with the rating) | | | |

1. Assessments and scoring rubrics need to be rated as high quality using the *Utah Assessment Review Tool.* [↑](#footnote-ref-1)
2. Assessments and scoring rubrics need to be rated as high quality using the *Utah Assessment Review Tool.* [↑](#footnote-ref-2)
3. Assessments and scoring rubrics need to be rated as high quality using the *Utah Assessment Review Tool.* [↑](#footnote-ref-3)
4. Assessments and scoring rubrics need to be rated as high quality using the *Utah Assessment Review Tool.* [↑](#footnote-ref-4)