**Student Learning Objective (SLO) Template**

*This template should be completed while referring to the* ***SLO Template Checklist****.*

Teacher Name: Content Area and Course(s): \_\_Plant and Horticultural Sciences- Ag 2

Grade Level(s): 9-12\_\_\_\_ Academic Year: 2013-2014

Please use the guidance provided in addition to this template to develop components of the student learning objective and populate each component in the space below.

**Baseline and Trend Data**

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

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| * Source of Information about students:
	+ Students in this course have had one year of previous course experience or no previous experience in Agricultural Education class.
	+ Students enrolled in Agricultural Education will integrate all three components of a successful Ag Ed program: Classroom Content, FFA, and SAE. The in-depth programming of Ag Ed is a year-round program that has high levels of interaction in the three-component model.
		- The Plant and Horticultural Sciences classroom content will be evaluated by a pre-test which will account for baseline data will founded upon a pre‐assessment by the 2nd week of school. The classroom growth targets are based upon a pre-test that is vetted and approved by content and assessment experts.
		- Summer visits will provide the opportunity to conduct SAE rubric evaluation with the student and parent/guardian. The students SAE records will be kept on Agriculture Experience Tracker (AET). This data is collected via AET to be culminating formative assessments for each students during the nine weeks then graded by rubric at the end of the time period for a summative evaluation of growth to formulate current growth and project growth for the next year. The SAE rubric is created by the Ohio Department of Education. The students self-assessment will account for 50% and the teacher evaluation will account for 50%
		- The FFA rubric will measure growth of student’s demonstration of premier leadership, personal growth, and career success based upon 21st century skills rubrics that are vetted and approved by the Buck Institute. The students self-assessment will account for 50% and the teacher evaluation will account for 50%
	+ Each Agriculture Class is a separate, individualized course.
* Pre-test results from this year:

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| Pre-Assessment Baseline Score Range | Number of students at this level |
| 61-70 |  |
| 71-80 |  |
| 81-90 |  |
| 91-100 |  |
| Total # of students |  |

* Summarizes the teacher’s analysis of baseline data by identifying students strengths and weaknesses
	+ The pre-test scores demonstrated:
		- SAE Data:
			* SAE mean -
			* SAE range -
		- FFA Data (measurement of 21st Century Skills):
			* FFA mean-
			* FFA range-
		- Classroom Curriculum Data:
			* Classroom mean -
			* Classroom range –
	+ These ranges will be addressed by differentiation of content and lessons for the classroom, FFA and SAE.
	+ The FFA and SAE scores demonstrate the growth of students that have performed over the year. Scores in the high 80 demonstrate strength, however, mastery of the FFA and SAE still need to be integrated to prepare the youth for career and college readiness skills.
* Draws upon trend data
	+ I have no hard data yet, however my perception data and previous years of experience as an educator demonstrate to the lack of mastered agricultural business content, 21st century skills, and record keeping knowledge of SAE projects.
	+ Student’s prior-year score from the students that took the previous course the previous year will be tested at the end of the previous year and create baseline data for the student growth targets in the current year in FFA and SAE. Over the three-year period I will collect baseline data to utilize as trend data.
	+ During the summer months, I have also done Standards-Based Student Visits with students and their parents/guardian. This will consist of taking the standards that apply to the visit and the students will need to self-assess themselves to determine the benchmarks and indicators that they are currently working towards mastering.
	+ Keeping data logged on the Agriculture Experience Tracker (AET) for each year that they are enrolled in agriculture education. Each nine weeks, each student’s AET will be graded with a rubric for formative assessments with a year-end evaluation for summative growth measures.
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| **Comments: Baseline and Trend Data** |
| *What information is being used to inform the creation of the SLO and establish the amount of growth that should take place within the time period?* |
| * Identifies sources of information about students (e.g., test scores from prior years, results of pre assessments)
* Draws upon trend data, if available
* Summarizes the teacher’s analysis of the baseline data by identifying student strengths and weaknesses
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**Student Population**

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

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| * Includes all students in the class covered by the SLO
	+ This SLO will apply to all students, grades 9-12 enrolled in the AFNR Course.
		- Freshman-
		- Sophomores-
		- Juniors-
		- Seniors-
* Describes the student  population and considers any contextual factors that may impact student growth
	+ All modifications will be integrated into projects related to their FFA, SAE project/Agri Science Fair Project for students that are gifted and on 504’s and IEP’s.

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| Gifted: Superior Cognitive  Science Social Studies Reading Math Visual & Performing Art Creative Thinking | #Total Gifted Students* – Science
* – Social Studies
* – Reading
* – Math
* – Visual Performing
* – Creative Thinking
 |
| Individual Educational Plan | # students |
| 504 Plans | # students |
| Foreign Exchange Students | # students |
| Special Circumstances | # students |
| Male | # students |
| Female | # students |
| White/Caucasian | # students |
| Hispanic/Latino | # students |
| Native American | # students |
| African American | # students |
| Other | # students |

* Does not exclude subgroups of students that may have difficulty meeting growth targets
	+ No students were excluded
* State that all students are included

No students were excluded  |

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| **Comments: Student Population** |
| *Which students will be included in this SLO? Include course, grade level, and number of students.* |
| * Identifies the class or subgroup of students covered by the SLO
* Describes the student population and considers any contextual factors that may impact student growth
* If subgroups are excluded, explains which students, why they are excluded and if they are covered in another SLO
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**Interval of Instruction**

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

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| * Matches the length of the course (e.g., quarter, semester, year)
	+ The duration of this course/SLO will encompass August 27th through April 18th.
* Length of the class & Days of the week
	+ The class is 50 minutes that meets daily. However, district testing and other events (e.g. assemblies, pep rallies, field trips, etc) will likely decrease slightly the overall instruction time.

Due to frequent learning opportunities with authentic audiences I meet student’s curricular needs with a blended classroom combining classroom instruction with virtual educational opportunities such as AET. |

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| **Comments: Interval of Instruction** |
| *What is the duration of the course that the SLO will cover? Include beginning and end dates.* |
| * Matches the length of the course (e.g., quarter, semester, year)
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**Standards and Content**

*What content will the SLO target? To what related standards is the SLO aligned?*

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| * . Specifies how the SLO will address applicable standards from the highest ranking of the following: (1) Common Core State Standards, (2) Ohio Academic Content Standards, or (3) national standards put forth by education organizations
	+ This course focuses on key topics in Plant and Horticultural Sciences developed by the Ohio Department of Education, which also includes FFA and SAE as components.
* Represents the big ideas or domains of the content taught during the interval of instruction

The target areas will include: This course focuses on skills and technologies essential for agricultural and/or horticultural crop production. Cultural and sustainable production practices will be examined. Students will apply scientific knowledge of plant development, nutrition, and growth regulation. Environmental aspects of irrigation, chemical application and soil conservation will be evaluated. The course will also include equipment and precision technologies used in the industry. Projects and activities will enable students to develop communication, leadership, and business management skills.* These overarching concepts will be representative of the following standards for this SLO.
* **Benchmark: 5.1 Soils**
* Level 1: Determine and analyze the physical, biological and chemical properties of soils and other plant growing media.
* **Benchmark: 4.15 Water Distribution Systems**
* Level 1: Identify tools and materials, design a water supply line with fixture and install
* **Benchmark: 7.1 Plant Nutrition**
* Level 1: Select and apply macronutrients, using basic application methods, and recognize the effect on plants and environment
* **Benchmark: 7.4 Plant Production and Management**
* Level 1: Manage growth of common types of plants
* **Benchmark: 7.3 Pest Management**

Level 1: Identify common types of plant pests and apply basic pest management control* **Benchmark: 7.5 Harvesting, Handling and Storage**
* Level 1: Harvest, handle and store plants and plant products
	+ Students will gain premier leadership, personal growth, and career success through the FFA & SAE (Supervised Agricultural Experiences)
		- Students with an **SAE** learn by doing. With help from their agricultural teachers, students develop an SAE project based on one or more SAE categories: **Entrepreneurship**: Own and operate an agricultural business (e.g. a lawn care service, a pay-to-fish operation, holiday poinsettia production and sales); **Placement**: Get a job or internship on a farm or ranch, at an agriculture-based business, or in a school or factory laboratory; **Research and Experimentation**: Plan and conduct a scientific experiment. (e.g. Determine whether the phases of the moon affect plant growth, or test and determine the efficacy of different welding methods); **Exploratory:** Explore careers in agriculture by attending an agriculture career fair, or creating a report or documentary on the work of a veterinarian. These overarching concepts will be representative of the following standards for this SLO.
	+ **Benchmark: 3.1 Marketing**
	+ Level 1:Promote a product or service using basic strategies for packaging, display and publicity.
	+ **Benchmark:** **3.3 Management**
	+ Level 1:Select and organize resources to develop a product or a service to be rendered.
	+ **Benchmark: 3.6 Information Management**
	+ Level 1: Select and use a computer and computer application for a specific purpose
	+ **Benchmark: 3.4 Finance**
	+ Level 1:Budget and monitor an enterprise’s income andexpenses.
	+ **Benchmark: 3.11 Research and Analysis**
	+ Level 1: Conduct a study or survey, select descriptive statistics, create graphical displays and draw conclusions .
		- **FFA** makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. These overarching concepts will be representative of the following standards for this SLO.
		- **Benchmark: 3.7 Communication Skills**
		- Level 1: Integrate a variety of communication techniques to gather and convey information to an individual or small group
		- Level 2: Conduct a business meeting using decision-making techniques
		- **Benchmark: 3.8 Business Leadership**
			* Level 1: Determine appropriate leadership style for a specific situation and apply to the situation
			* Level 2: Use multiple leadership concepts to change situations and enhance effectiveness in the change process
		- **Benchmark: 3.9 Emotional Intelligence**
			* Level 1: Exhibit desirable personal and professional appearance, attitudes, behaviors, and work habits
			* Level 2: Exhibit techniques to control emotional reactions to people and situations
* Identifies core knowledge and skills students are expected to attain as required by the applicable standards (if the SLO is targeted)
	+ In addition, this SLO is aligned with the course and unit descriptions of Agriculture, Food and Natural Resources as provided by Ohio Department of Education.
* Aligned to Agricultural Education Standards
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| **Comments: Standards and Content** |
| *What content will the SLO target? To what related standards is the SLO aligned?*  |
| * Specifies how the SLO will address applicable standards from the highest ranking of the following: (1) Common Core State Standards, (2) Ohio Academic Content Standards, or (3) national standards put forth by education organizations
* Represents the big ideas or domains of the content taught during the interval of instruction
* Identifies core knowledge and skills students are expected to attain as required by the applicable standards (if the SLO is targeted)
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**Assessment(s)**

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

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| * Identifies assessments that have been reviewed by content experts to effectively measure course content and reliably measure student learning as intended
	+ The assessment to measure student growth will be as follows:
		- Classroom Content – The classroom content will be determined by administering a pre and post test developed by content experts and approved by a local committee consisting of questions based on the course standards. The test will be given at the beginning and end of the course to determine the growth of the student.
		- FFA – Rubrics from the Buck Institute will measure 21st century skills gained in leadership, career development, and human resources that is based upon project based learning. As the FFA Association aligns Career Technical Student Organizations to content standards and measures mastery these assessments will be included.
		- SAE – Rubrics from the Ohio Department of Education on “Guidelines and Expectations for SAE Programs in Ohio”. After a student has the begun to implement their SAE program and students are recording their data onto the AET and be evaluated by the rubric.
	+ After evaluating data and seeing trends with students for their growth I have set an achievement level at proficient level with a minimum threshold score plus a minimum gain. The capstone project will demonstrate additional growth through the measurement of content standards mastery.
	+ To ensure that the summative rubric assessments are fair and unbiased the Classroom, FFA, and SAE will be self-assessed with 50% of the score arriving from the student’s self-assessment and 50% from the teacher’s evaluation.
* Selects measures with sufficient “stretch” so that all students may demonstrate learning, or identifies supplemental assessments to cover all ability levels in the course

The tiered targets below include a minimum threshold score plus a minimum gain on the capstone project.* Provides a plan for combining assessments if multiple summative assessments are used
	+ The classroom rubric will be weighted as 34%, the SAE rubric will be weighted as 33% of the portfolio, and the FFA rubric will be weighted as 33%.
* Follows the guidelines for appropriate assessments

Per their Gifted, IEPs and 504s, all accommodations will be followed for all students will disabilities. |

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| **Comments: Assessment(s)** |
| *What assessment(s) will be used to measure student growth for this SLO?*  |
| * Identifies assessments that have been reviewed by content experts to effectively measure course content and reliably measure student learning as intended
* Selects measures with sufficient “stretch” so that all students may demonstrate learning, or identifies supplemental assessments to cover all ability levels in the course
* Provides a plan for combining assessments if multiple summative assessments are used
* Follows the guidelines for appropriate assessments
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**Growth Target(s)**

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

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| * Ensures all students in the course have a growth target

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| Pre-Assessment Baseline Score Range | Target Score Range on Post Assessments |
| 61-70 | Score a 75 or growth of 14 points whichever is greater |
| 71-80 | Score a 85 or growth of 14 points whichever is greater |
| 81-90 | Score a 95 or growth of 14 points whichever is greater |
| 91-100 | Score a 97 points  |

* + All students have growth targets that are tiered to measure growth that will align with the target score growth that includes a minimum threshold score plus a minimum gain on the capstone project as a part of demonstration of growth.
* Uses baseline or pretest data to determine appropriate growth
	+ The multiple pretests will serve as the basis to determine appropriate growth measures based upon baseline score ranges.
* Sets developmentally appropriate targets
	+ Measures are appropriate from pre-test evaluation that is based upon multiple assessments on the Classroom Content, FFA, and SAE plus the students’ own self-assessment therefore these are appropriate measures to determine appropriate growth.
* Creates tiered targets when appropriate so that all students may demonstrate growth
	+ There will be six tiered targets as directed in the section above.
* Sets ambitious yet attainable targets
	+ These ambitious, yet attainable targets ensure all students will show growth based upon the six-tier target system.
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| **Comments: Growth Target(s)** |
| *Considering all available data and content requirements, what growth target(s) can students be expected to reach?*  |
| * All students in the class have a growth target in at least one SLO
* Uses baseline or pretest data to determine appropriate growth
* Sets developmentally appropriate targets
* Creates tiered targets when appropriate so that all students may demonstrate growth
* Sets ambitious yet attainable targets
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**Rationale for Growth Target(s)**

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

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| * Demonstrates teacher knowledge of students and content
	+ The targets combine the measurement of classroom content, FFA, and SAE that are critical to the real world success of students in the next stages of their lives. The 21st century skills, agricultural content, and entrepreneurship/placement skills taught in the content of the Plant and Horticultural Sciences program to give students the applicable strategies to reduce the workforce skill gap and prepare students to be career and college ready.
	+ This class combines relevant agricultural content with content and life skills from FFA and SAE in a year-round curriculum. Long-term interaction with the students, as well as, their parents/guardians and employers lends to a strong connectivity to the in-depth knowledge of each students.
* Explains why target is appropriate for the population
	+ Plant and Horticultural Sciences is a hands‐on course and students cannot be assessed just by a post‐test. A large portion of the summative assessments will be the performance-based tasks in the three core component areas: Classroom Content, SAE, and FFA. The growth targets are above proficient and challenge students to grow.
* Addresses observed student needs
	+ At home visits with students, parents and/or guardians, and employers I validate each students’ individual growth targets and design action plans to address deficits and grow strengths.
	+ I have no hard data yet, however my perception data and previous year’s of experience as an educator demonstrate to the lack of mastered agricultural business content, 21st century skills, and record keeping knowledge of SAE projects.
* Uses data to identify student needs and determine appropriate growth targets
	+ Measures of data from pre-test evaluation that is based upon multiple assessments on the Classroom Content, FFA, and SAE plus the students’ own self-assessment that identifies the student’s need for a deeper understanding of Classroom Content, FFA, and SAE.
	+ Lower performing students will be expected to demonstrate more growth in order to meet course expectations of proficient. By incorporating the projects in three core areas higher performing students will be stretched.
* Explains how targets align with broader school and district goals
	+ The Plant and Horticultural Sciences components align to the Ohio Improvement Plan and Race to the Top to teach 21st Century Skills so our students are life-long learners. This also includes teaching students to set personal learning goals, create strategies and action steps and evaluate their progress toward those learning goals based on our formative assessment system to activate students' in their own learning.
* Sets rigorous expectations for students and teacher(s)
	+ Providing multiple forms of assessments that include Project Based Learning, performance based assessments, service-learning projects, experiential learning and career technical student organization events sets rigorous expectations. Students will move from comprehension and knowledge up to applying, synthesizing, and creating information in the field of Agricultural Business.
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| **Comments: Rationale for Growth Target(s)** |
| *What is your rationale for setting the target(s) for student growth within the interval of instruction?* |
| * Demonstrates teacher knowledge of students and content
* Explains why target is appropriate for the population
* Addresses observed student needs
* Uses data to identify student needs and determine appropriate growth targets
* Explains how targets align with broader school and district goals
* Sets rigorous expectations for students and teacher(s)
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