

Willoughby-Eastlake CSD Student Learning Objective (SLO) Template (with Embedded Checklist)

Teacher Name: _____ Content Area and Course(s): AP Calculus AB Grade Level(s): 11th & 12th Academic Year: 2013/2014

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?

Data was obtained from a district created Pre-Assessment based on the Common Core Standards for Calculus.

On this assessment, the average score was 22.8%. 73.9% of the students scored below a 30%. 17.4% of the students scored between 30% and 40%. 8.7% of the students scored above a 40%.

Students were strong in solving trigonometry questions but were weak in all other aspect of the pre-assessment.

Student Population

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

This includes all AP Calculus AB students. This encompasses grades 11 and 12. There are a total of 23 students in AP Calculus AB. No subgroups have been excluded.

Interval of Instruction

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

The course will meet for 180 days starting on the first day of school and ending on the last day of school. The assessment will be based on information taught to students from the first day of school until April 1.

The class will meet Monday – Friday for 45 minutes.

Standards and Content

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

The content that will be covered on this exam was created by the College Board.

Key elements of the standards covered on this test will include:

I. Functions, Graphs, and Limits

- Analysis of graphs.
- Limits of functions (including one-sided limits)
- Asymptotic and unbounded behavior
- Continuity as a property of functions

II. Derivatives

- Concept of the derivative
- Derivative at a point
- Derivative as a function
- Second derivatives
- Applications of derivatives
- Computation of derivatives

III. Integrals

- Interpretations and properties of definite integrals
- Applications of integrals.
- Fundamental Theorem of Calculus
- Techniques of antidifferentiation
- Applications of antidifferentiation
- Numerical approximations to definite integrals.

Assessment(s)

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

Students will be assessed using a 25 question multiple choice exam connected to the College Board Concepts based on the key elements addressed above.

Growth Target(s)

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

Students will be expected to grow based on the formula $(100 - \text{pre-assessment score}) \div 4$.

At 10% increments, this breaks down to look like:

1. 0% will grow to 25%
2. 10% will grow to 33%
3. 20% will grow to 40%
4. 30% will grow to 48%
5. 40% will grow to 55%

All values that fall in between these increments will be calculated based on the formula above.

Rationale for Growth Target(s)

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

The formula that we decided on, $(100 - \text{pre-assessment score}) \div 4$, was suggested and agreed upon based upon by our middle school and high school math teachers as a minimum growth that we would expect to see out of our students for the year. We recognized that as the pre-assessment score increased, there was less room for growth. We felt that these growth targets would adequately represent proper growth of the student. Targets are aligned with the broader school and district goal of improving student achievement.