



## Calculus Instruction in the West Shore School District

Mathematics instruction in the West Shore School District is aligned to the PA Core Standards and identified best practices. We utilize a variety of strategies and differentiate our instruction to meet the needs of all learners. Technology and 21st Century Skills are thoughtfully woven into our lessons and units of instruction. This document is meant to offer an overview of important concepts in this course. Calculus is an advanced mathematics course for students who wish to pursue a career in a field directly related to mathematics or the physical sciences. It provides the equivalent of at least one semester of college work in calculus. Topics covered include algebra of functions, limits, derivatives, and integrals.

### Best Practices in Calculus:

- Discovery learning of concepts both algebraically and graphically.
- Connection of Algebraic and Graphical concepts to real world data and situations.
- Emphasis on understanding mathematical concepts through the use of graphing calculators and technology.
- Evaluation that focuses on Derivatives and Integrals as well as their application.
- All mathematical content within units will incorporate rigor, connection, and application.

### Skills and Concepts:

- Limits
- Derivatives
- Application of Derivatives
- Definite Integrals
- Differential Equations
- Applications of Integration

### Assessments:

WSSD utilizes a variety of assessments to monitor student growth and achievement. Our teachers engage in daily informal formative assessments to make timely decisions about whether a student understands the material and concepts being presented. We also utilize several summative assessments to determine if a student has mastered grade level skills and standards.

*Some of the assessment utilized are:*

- Quizzes
- Tests
- Projects
- Midterm
- Final Exam

### Materials and Resources:

WSSD utilizes a variety of resources to meet all learners' needs.

- Graphing Calculators

### Parent Resources:

[Kahn Academy](#)