AP Calculus AB Curriculum
Boyceville Community School District
Created: April 2011
Created and Updated By: Andy Hamm

I. Introduction

Advanced Placement Calculus AB is a rigorous year-long course that teaches students Calculus at an advanced level in preparation for the Advanced Placement Calculus AB examination in May. Students who enroll in AP Calculus AB are expected to have completed Pre-Calculus with a "B" grade or better, or have instructor consent.

AP Calculus AB focuses on three major areas of study: functions, graphs, and limits, derivatives, and integrals. In-class discussions and advanced problem solving are both supplemented by inquiry-based teaching methods, including extensive use of laboratory exercises and classroom demonstrations, both heavily supplemented by the use of technology and computer-based probes and data collection as well as TI-brand graphing calculators. A class set of TI-84+ graphing calculators will be used extensively throughout the course and students will become skilled in their use for problem solving. Students will have these calculators available for check-out to take home and use on the AP Calculus AB test in May. There will be enough calculators for every student to use them individually.

II. Course Resources

The textbook used for AP Calculus AB at will be *Calculus: Graphical, Numerical, Algebraic AP Edition* (3rd Ed.) by Finney, Demana, Waits, & Kennedy (Pearson Education, 2007). This book is very well aligned to the current topic outline for AP Calculus AB and provides students with many different types of example problems throughout each section. In addition, I will be using the most current version of the AP Calculus course description released by the College Board, which I have read in full. I will also be using the resources available on the College Board's website, including released test materials.

III. Assessment and Grading

Students will be assessed using a combination of techniques, including written exams, oral exams, laboratory assessments, and performance assessments.

Student grades are comprised of the following parts:

Tests/Quizes	**50%**
Homework Assignments	**40%**
Midterm/Final Exam	**10%**

Students will be assigned a homework problem set for each section of their textbook, and these problems comprise most of the homework portion of their quarter grades. These textbook problem sets will be supplemented by at least three practice AP Calculus AB free-response questions every two weeks which will also be used in the students' weekly quizzes. The final part of the homework portion of their quarter grades will come from periodic graphing calculator technology laboratory activities with the TI-84+ graphing calculators. These activities will be completed in small groups, providing the students with the opportunity to explore Calculus in groups using technology. I expect all students to show all of their work from start to finish and to keep their solutions well-organized. Other technology that will be used in this course includes the eight computers in the classroom, a SMART Board with a TI-84+ graphing calculator emulator, and several sets of VERNIER Logger Pro data loggers and probes, including temperature, pH, gas pressure, and motion detector, which will be used heavily in the position/velocity/acceleration sections of the course.

I have attached my Curriculum Map for AP Calculus AB to provide you with additional information about the course structure and the content taught including a timeline and information on the laboratory activities completed throughout the year.

Regarding how this curriculum is tied to the Wisconsin Science Model Academic Standards, the following statement has been taken from the WI DPI website:

"Not all students will elect to pursue the more advanced math courses often considered college preparatory or advanced placement courses. The mathematics standards do not represent the level of achievement expected in these higher level courses. Rather, they try to capture the knowledge and skills needed to be a scientifically literate citizen."

Hence, for this AP Calculus AB class, this column is intentionally left blank

IV. AP Calculus AB Graphing Calculator Laboratory Exercises

1. Exploring Functions in a Graphing Calculuator

2. Parameterizing Circles

3. Testing for Inverses Graphically

4. Unwrapping Trigonometric Functions

5. Exploring Limits as x approaches infinity

6. Effectively Reading Graphs

7. Zooming in to "see" Differentiability

8. Growth Rings on a Tree

9. Making a Conjecture with NDER

10. An Unexpected Derivative

11. Finding a Derivative on an Inverse Graph Geometrically

12. Leaving Milk on the Counter

13. Finding Extreme Values

14. Finding f from f' and f"

15. Constructing Cones

16. Appreciating Local Linearity

17. The Sliding Ladder

18. Which RAM is the biggest?

19. Finding Integrals by Signed Areas

20. How Long is the Average Chord of a Circle?

21. The Effect of Changing the Limits of Integration

22. Area Under a Parabolic Arc

23. Seeing the Slopes

24. Choosing the Right u and dv

25. Choosing a Convenient Base

26. Learning from the Differential Equation

27. A Family of Butterflies

28. Volume by Cylindrical Shells

Unit 1: Prerequisites for Calculus	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
Full-Year Course 1 Credit	***CURRICULUM*** *End Product of Learning, "What" You Teach*			***INSTRUCTION*** *Means to the End Product, "How" You Teach*	***ASSESSMENT*** *Validation to Revise Curriculum & Instruction*
TIME FRAME [By Date, Week, Etc.]	**WI STANDARD OR BENCHMARK** [Include ITL STANDARDS, if relevant]	**CONTENT: What we want students to "KNOW".**	**SKILL: What we want students to "DO".**	**Varied Teaching/Learning Strategies Resources/Comments** [ITL Connection, if relevant] [Modifications for IEP, Remediation, Intervention, Gifted/Talented]	**Varied Classroom Assessment Strategies** [How we know that students "GET IT".]
Chapter 1 2 days	From the WI DPI Model Academic Standards: "Not all students will elect to pursue the more advanced mathematics courses often considered college preparatory or advanced placement courses. The mathematics standards do not represent the level of achievement expected in these higher level courses. Rather, they try to capture the knowledge and skills needed to be a mathematically literate citizen." Hence, for this AP class, this column is left blank.	-What is a line? -How are parallel and perpendicular lines related? -What are the different equations for a line? -What is a function? -How are domain and range related? What is the domain and range of a function? -What is the difference between even and odd functions? -What are piecewise functions? -What are absolute value functions? -What are composite functions?	-Write the equation of a line in various forms -Determine the domain and range of a given function -Determine whether a function is even or odd -Differentiate among different types of functions, including piecewise, absolute value, and composite functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is an exponential function? -What is exponential growth? What is exponential decay? -What is the number *e* and why is it important? -What are some important application of exponential functions?	-Use exponential functions to solve real-world problems	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 1: Exploring Functions in a Graphing Calculator**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is a parametric equation? -How are parametric equations used? -What are some common applications of parametric equations?	-Use parametric equations to describe relations, circles, ellipses, and other curves.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 2: Parameterizing Circles**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What are logarithms? -What are logarithms used for? -How can logarithms be used to solve exponential equations? -What are some common properties of logarithms?	-Use logarithms to solve exponential equations -Use the properties of logarithms to simplify logarithmic expressions and equations	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **Lab 3: Testing for Inverses Graphically**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What are the common trigonometric functions? -What are the applications of the common trigonometric functions?	-Solve equations involving trigonometric functions -Graph the trigonometric functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts, **Lab 4: Unwrapping Trigonometric Functions**	-Unit Test Questions -Student questioning -Homework problems

Unit 2: Limits & Continuity	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
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TIME FRAME [By Date, Week, Etc.]	**WI STANDARD OR BENCHMARK** [Include ITL STANDARDS, if relevant]	**CONTENT: What we want students to "KNOW".**	**SKILL: What we want students to "DO".**	**Varied Teaching/Learning Strategies Resources/Comments** [ITL Connection, if relevant] [Modifications for IEP, Remediation, Intervention, Gifted/Talented]	**Varied Classroom Assessment Strategies** [How we know that students "GET IT".]
Chapter 2 2 days		-What is the difference between average and instantaneous rates? -What is a limit? -What are some of the common properties of limits? -What are the differences between one-sided and two-sided limits?	-Describe the differences between average and instantaneous rates -Understand the definition of a limit and how to calculate the limit of a function as it approaches a real value -Differentiate between one-sided and two-sided limits	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
2 days		-How are limits calculated as x approaches positive or negative infinity? -What is the "end behavior" of a function? How can this be determined?	-Calculate the limit of a function as it approaches positive or negative infinity, if it exists. -Describe the "end behavior" of various functions.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 5: Exploring Limits as x approaches Infinity**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is continuity? -What is a continuous function? -How is continuity related to the limit of a function? -What are the different types of discontinuities? -What is the intermediate value theorem for continuous functions?	-Determine the continuity of a function using limits -Determine the specific type of discontinuity in a discontinuous function, if possible -Apply the intermediate value theorem to a function that is continuous over a certain interval.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
3 days		-What is a rate of change? -What is a tangent line to a curve? -How can the slope of a curve be determined? -What is a normal line?	-Differentiate between tangent lines and normal lines -Describe how to find the equation of a line tangent or normal to a curve -Apply the idea of limits to tangent and normal lines	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems

Unit 3: Derivatives	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
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Chapter 3 2 days		-What is a derivative? -What notation is associated with a derivative? -Is a derivative a function? -Can a derivative be graphed?	-Calculating the derivative of a function -Graphing the derivative of a function when it is also a function -Relating the graphs of a function and its derivative	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 6: Effectively Reading Graphs**	-Unit Test Questions -Student questioning -Homework problems
2 days		-Can the derivative of a function be calculated at any point? -What is local linearity? -What happens when a derivative of a function fails to exist? -How is differentiability related to a function's continuity? -What is the intermediate value theorem for derivates?	-Relate differentiability to local linearity -Determine the types of situation where a derivative fails to exist -Relate differentiability to a function's continuity -Apply the intermediate value theorem to derivates of functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 7: Zooming in to "see" differentiability**	-Unit Test Questions -Student questioning -Homework problems
3 days		-How is the derivative calculated? -What is a second-order or higher-order derivative? -How is the derivative of a product or quotient of functions calculated? -How is the derivative of a negative integer power of x calculated?	-Calculate the derivative of various continuous functions -Use the power rule to calculate the derivative of a product of two functions -Use the quotient rule to calculate the derivative of the quotient of two functions -Calculate the derivative of a function containing a negative integer power of x.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is an instantaneous rate of change? -How is velocity related to speed? -What are some common applications of derivatives	-Use derivates in real-world application problems in Physics and Economics	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 8: Growth Rings on a Tree**	-Unit Test Questions -Student questioning -Homework problems
3 days		-How can the derivative of a trigonometric function be determined? -What is simple harmonic motion? How can trigonometric functions be used to model simple harmonic motion?	-Calculate the derivative of the sine function -Calculate the derivative of the cosine function -Use a trigonometric function to model simple harmonic motion periodic behavior -Calculate the derivative of the other trigonometric functions using the product and/or quotient rules.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 9: Making a Conjecture with NDER**	-Unit Test Questions -Student questioning -Homework problems

3 days		-What is the chain rule? -How can the chain rule be used to find the derivative of a composite function?	-Use the chain rule to find the derivative of a composite function -Calculate the derivative of various functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
3 days		-What is an implicitly defined function? -How can an implicitly defined function be differentiated?	-Identify implicitly defined functions -Calculate the derivative of an implicitly defined function.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 10: An Unexpected Derivative**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What are the derivatives of the inverse trigonometric functions?	-Calculate the derivative of the six inverse trigonometric functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 11: Finding a Derivative on an Inverse Graph Geometrically**	-Unit Test Questions -Student questioning -Homework problems
3 days		-What is the derivative of an exponential function? -What is the derivative of a natural logarithmic function? -What is the derivative of a logarithmic function of base other than the natural number?	-Calculate the derivative of various exponential functions, using the chain rule when necessary -Calculate the derivative of functions involving the natural logarithm -Calculate the derivative of functions including logarithms with other bases.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 12: Leaving Milk on the Counter**	-Unit Test Questions -Student questioning -Homework problems

Unit 4: Applications of Derivatives	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
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TIME FRAME [By Date, Week, Etc.]	**WI STANDARD OR BENCHMARK** [Include ITL STANDARDS, if relevant]	**CONTENT: What we want students to "KNOW".**	**SKILL: What we want students to "DO".**	**Varied Teaching/Learning Strategies Resources/Comments** [ITL Connection, if relevant] [Modifications for IEP, Remediation, Intervention, Gifted/Talented]	**Varied Classroom Assessment Strategies** [How we know that students "GET IT".]
Chapter 4 2 days		-How can extreme values of a function be calculated using derivatives? -How can local extreme values of a function be calculated using derivatives? -How can a function be sketched using its first and second derivatives?	-Identify local extreme values of a function using its first derivative -Relate areas of a function whose derivative is equal to zero to local extreme values.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 13: Finding Extreme Values**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is the mean value theorem? -How can a function's first derivative be used to determine whether a function is increasing or decreasing over a certain interval?	-Use the mean value theorem with a function's first derivative to learn more information about the given function	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
4 days		-How can a function's second derivative be used to learn information about the given function? -What is the concavity of a function? -What is a function's inflection point(s)? -What is the first derivative test for local extrema? -What is the second derivative test for local extrema? -How can a functions' first and second derivatives be used to learn more information about the function/	-Use the first derivative and second derivate tests for local extrema to identify local extreme values for a function -Use a function's second derivative to locate inflection points and concavity -Use a function's first derivative to locate areas of increasing or decreasing values in the function -Use a function's first and second derivatives to sketch the given function	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 14: Finding f from f' and f''**	-Unit Test Questions -Student questioning -Homework problems
3 days		-What is a mathematical model? -How can derivatives be used as mathematical models? -How can mathematical models be created?	-Describe and solve mathematical models used in business & industry, Physics, Economics, & Mathematics.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 15: Constructing Cones**	-Unit Test Questions -Student questioning -Homework problems

4 days		-What is linearization? -What is a linear approximation? -What is Newton's Method of linear approximation? How is it useful for solving equations? -What is a differential? -How are different functions sensitive to change?	-Use Newton's Method to approximate the solution to given equations. -Use linearizations to approximate roots of numbers. -Use differentials to estimate change within a function	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 16: Appreciating Local Linearity**	-Unit Test Questions -Student questioning -Homework problems
4 days		-What is a related rate problem? -How can derivatives be used to solve related rate problems? -How are related rate problems best solved?	-Solve various related rate problems using derivatives	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 17: The Sliding Ladder**	-Unit Test Questions -Student questioning -Homework problems

Unit 5: Integration	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
Full-Year Course 1 Credit	***CURRICULUM*** *End Product of Learning, "What" You Teach*			***INSTRUCTION*** *Means to the End Product, "How" You Teach*	***ASSESSMENT*** *Validation to Revise Curriculum & Instruction*
TIME FRAME [By Date, Week, Etc.]	**WI STANDARD OR BENCHMARK** [Include ITL STANDARDS, if relevant]	**CONTENT: What we want students to "KNOW".**	**SKILL: What we want students to "DO".**	**Varied Teaching/Learning Strategies Resources/Comments** [ITL Connection, if relevant] [Modifications for IEP, Remediation, Intervention, Gifted/Talented]	**Varied Classroom Assessment Strategies** [How we know that students "GET IT".]
Chapter 5 2 days		-How can the area under a curve be approximated? -What is the rectangular approximation method? -How can the rectangular approximation method be used to approximate the area underneath a curve? -How can the rectangular approximation method be used to estimate the volume of a sphere?	-Use the rectangular approximation method to find the area underneath a curve -Use the rectangular approximation method to approximate the area of a sphere	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 18: Which RAM is the biggest?**	-Unit Test Questions -Student questioning -Homework problems
4 days		-What is a Riemann Sum? -How can Riemann Sums be used to approximate the area underneath a curve? -What is an integrable function over a certain interval? -What is a definite integral? -What is the nomenclature associated with definite integrals? -How is the area underneath a curve associated with integration? -What is the integral of a constant function?	-Use Riemann Sums to approximate the area underneath a curve and develop an understanding of integration -Understand the nomenclature associated with integration -Calculate the integral of a constant function -Understand that not all functions are integrable	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 19: Finding Integrals by Signed Areas**	-Unit Test Questions -Student questioning -Homework problems
4 days		-What is an antiderivative? -How is an antiderivative related to integration? -What are the rules of antidifferentiation? -What is an average mean value for a function? How can it be calculated? -What is the mean value theorem for definite integrals?	-Calculate the antiderivative of various functions? -Integrate various continuous functions over a closed interval -Calculate the average mean value of a function -Apply the average mean value of a function to the mean value theorem	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 20: How Long is the Average Chord of a Circle?**	-Unit Test Questions -Student questioning -Homework problems
4 days		-What is the first fundamental theorem of Calculus? Why is it important? -What is the second fundamental theorem of Calculus? How can it be used to calculate the integral of a function over a closed interval?	-Use the first fundamental theorem of Calculus to relate derivatives to antiderivatives and integration -Use the second fundamental theorem of Calculus to integrate various continuous functions over a closed interval.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 21: The Effect of Changing the Limits of Integration**	-Unit Test Questions -Student questioning -Homework problems

2 days		-What is the trapezoidal rule for approximating the area underneath a curve? -Why is the trapezoidal rule for approximating the area underneath a curve superior to the rectangular method in most situations? -What is Simpson's rule for approximating the area underneath a curve?	-Use the trapezoidal rule to approximate the area underneath the curve of a function -Use Simpson's rule to approximate the area underneath the curve of a function -Compare and contrast the Rectangular Method, Trapezoidal Method, and Simpson's Method for approximating the area underneath the curve of a function.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 22: Area under a Parabolic Arc**	-Unit Test Questions -Student questioning -Homework problems

Unit 6: Differential Equations & Mathematical Modeling **MATHEMATICS CURRICULUM MAP** Grades 11-12

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Chapter 6 6 days		-What is a differential equation? -How can differential equations be "solved?" -What are the different types of differential equations? -What is the general solution to a differential equation? -What is an initial value problem? -What is a slope field? -What is the method of Separation of Variables for solving differential equations? -What is Euler's Method of approximating solutions to differential equations?	-Identify different types and orders of differential equations -Identify a general solution to a differential equation -Create a slope field for a given differential equation -Interpret a given slope field -Use the method of Separation of Variables to solve an initial value problem for a particular solution. -Use Euler's Method to approximate the solution to a differential equation at a given point.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 23: Seeing the Slopes**	-Unit Test Questions -Student questioning -Homework problems
4 days		-What is an indefinite integral? -What is a constant of integration? -How can substitution used to evaluate integrals? -What is "u-substitution?"	-Compute indefinite integrals -Use "u-substitution" to complete antidifferentiation by substitution	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
3 days		-What is integration by parts? -When is integration by parts useful? -What happens when integration by parts needs to be repeated? Repeated twice? -What is tabular integration? How is it related to integration by parts?	-Use the formula for integration by parts to integrate various functions -Use tabular integration to integrate various functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 24: Choosing the Right u and dv**	-Unit Test Questions -Student questioning -Homework problems
2 days		-What is the general equation for exponential change? -How is the general equation for exponential change related to a differential equation? -How is radioactivity an example of a differential equation?	-Apply the general equation for exponential change to real-world situations, including radioactivity and Newton's Law of Cooling	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 25: Choosing a Convenient Base**	-Unit Test Questions -Student questioning -Homework problems

3 days		-What is logistic growth? -What is integration by partial fractions?	-Apply and solve logistic models to real-world situations -Use the method of partial fractions to integrate various functions	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 26: Learning from the Differential Equation**	-Unit Test Questions -Student questioning -Homework problems

Unit 7: Applications of Definite Integrals	**MATHEMATICS CURRICULUM MAP**				Grades 11-12
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Chapter 7 4 days		-How can an integral be interpreted as net change? -How can the linear motion of a particle be modeled by using calculus? -How are the position, velocity, and acceleration of a particle related using calculus?	-Model real-world data using derivatives and integrals -Model the motion of a particle using derivatives and integrals and solve for different variables	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts	-Unit Test Questions -Student questioning -Homework problems
4 days		-How can integration be used to find the area between two curves? -How should the integrands be set up when determining the area between two curves? -How can integration be used to find the area of a subregion between two curves? -How can an area between two curves be integrated with respect to y instead of with respect to x?	-Use integration to find the area between two curves -Find the intersection points between the two curves to determine the limits of integration -Change both functions to make y the independent variable and change the limits of integration before integrating with respect to the y variable.	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 27: A Family of Butterflies**	-Unit Test Questions -Student questioning -Homework problems
8 days		-How can integration be used to find the volume of a solid? -What is a solid of revolution? -How can circular cross sections be used to find the volume of a solid? -How can washer cross sections be used to find the volume of a solid? -How can cylindrical shells be used to find the volume of a solid?	-Use integration and the circular cross sections to find the volume of a solid when a given function is rotated around an axis -Use integration and the washer cross sections to find the volume of a solid when a given function is rotated around an axis -Use integration and the cylindrical shell sections to find the volume of a solid when a a given function is rotated around an axis	-SMART Notebook presentation -Direct instruction -Textbook assignments -Vodcasts **-Lab 28: Volume by Cylindrical Shells**	-Unit Test Questions -Student questioning -Homework problems

The remainder of the time, if any, will be used to prepare for the AP Calculus AB Exam in May by reviewing. After the exam and before graduation, which is usually one or two weeks later, the class will complete a famous mathematician project.