

High School Mathematics Calculus

	September----November	December-----March	April-----June
Units	Differential Calculus	Integral Calculus	AP Prep Final Project
Strands	Students must have already met the standards of the Maine <i>Learning Results</i> prior to enrolling in Advanced Placement Calculus		
Activities	Follow Text and Resources of <i>Calculus</i> , Larson Chapters 1-3	Follow Text and Resources of <i>Calculus</i> , 4-7	1) Practice multiple choice and Free Response questions from released AP exams 2) Apply calculus to real life situation and present findings
Assessments	Teacher-created or Text Chapter test	Teacher-created or Text Chapter tests	Full practice AP exam Final Project/presentation rubric

Vocabulary	Derivative- 1 st , 2 nd Mean Value Theorem Newton's Method Tangent line Secant line Differential Concavity Point of inflection Limit Asymptote Power Rule Constant Rule u- substitution Constant Multiple Rule Continuous Discontinuity Intermediate Value Thm. Sum/Difference Rules Product Rule Quotient Rule Chain Rule Implicit Differentiation Extrema Extreme Value Thm. Critical Number Rolle's Theorem First Derivative Test Second Derivative Test Differential	Integral Average value of a function Fundamental theorem of calculus Solid of revolution Disc method Washer method Shell method Inverse trigonometric functions Frustrum Mean Value Theorem for Integrals Sigma Notation Trapezoid rule Simpson's rule Riemann Sum Second Fundamental theorem of Calculus Index of summation Inscribed rectangle Circumscribed rectangle Upper sum Lower sum Natural logarithmic function e Log Rule for Integration Inverse Function Horizontal line test Natural exponential function Exponential Growth/Decay Separation of Variables Arc Length Fluid pressure	
Resources	Chapters 1-3 of Larson text	Chapters 4-7 of Larson text	AP Released Problems