



AP CALCULUS BC UNIT PLANNER



Unit title	Unit 6: Integration & Accumulation of Change	Unit duration	3 weeks
Essential Questions (OR GUIDING QUESTIONS?)			
<p>How can integration be used to describe how a value changes over time?</p> <p>How is integration related to finding area?</p> <p>How are integration and differentiation related?</p>			
Assessments			
<p>Homework Quizzes</p> <p>Formative Assessments</p> <p>Summative Assessment</p>			
Content Standards			
<p>6.1 Exploring accumulations of change</p> <p>6.2 Approximating areas with Reimann sums</p> <p>6.3 Riemann sums, summation notation, and definite integral notation</p> <p>6.4 The fundamental theorem of calculus and accumulation functions</p> <p>6.5 Interpreting the behavior of accumulation functions involving area</p> <p>6.6 Applying properties of definite integrals</p> <p>6.7 The fundamental theorem of calculus and definite integrals</p> <p>6.8 Finding antiderivatives and indefinite integrals: basic rules and notation</p> <p>6.9 Integrating using substitution</p> <p>6.10 Integrating functions using long division and completing the square</p> <p>6.11 Integrating using integration by parts</p> <p>6.12 Using linear partial fractions</p> <p>6.13 Evaluating improper integrals</p> <p>6.14 Selecting techniques for antidifferentiation</p>			
Learning Activities and Experiences			
Topic	Resource	Content Covered	Standards Addressed
Accumulation	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 1-2	<ul style="list-style-type: none"> Exploring accumulations of change 	6.1
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 3-6 Skill Builder WS 6.2	<ul style="list-style-type: none"> Approximating areas with Reimann sums 	6.2

	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 7-14 Skill Builder WS 6.3	<ul style="list-style-type: none"> Riemann sums, summation notation, and definite integral notation 	6.3
Fundamental Theorem of Calculus	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 15-19 Skill Builder WS 6.4-6.5	<ul style="list-style-type: none"> The fundamental theorem of calculus and accumulation functions 	6.4
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 20-22 Skill Builder WS 6.6	<ul style="list-style-type: none"> Interpreting the behavior of accumulation functions involving area 	6.5
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 23-27 Skill Builder WS 6.7, 6.8	<ul style="list-style-type: none"> Applying properties of definite integrals 	6.6
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 23-27 Skill Builder WS 6.7, 6.8	<ul style="list-style-type: none"> The fundamental theorem of calculus and definite integrals Finding antiderivatives and indefinite integrals: basic rules and notation 	6.7 6.8
Integration methods	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 28-34 Skill Builder WS 6.9	<ul style="list-style-type: none"> Integrating using substitution 	6.9
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 35-37 Skill Builder WS 6.10	<ul style="list-style-type: none"> Integrating functions using long division and completing the square 	6.10
	Unit 6 – Additional BC Content Guided Notes (pdf adapted from Tony Record), pages 4-6 Skill Builder WS 6.11	<ul style="list-style-type: none"> Integrating using integration by parts 	6.11
	Unit 6 – Additional BC Content Guided Notes (pdf adapted from Tony Record), pages 7-10 Skill Builder WS 6.12	<ul style="list-style-type: none"> Using linear partial fractions 	6.12
	Unit 6 – Additional BC Content Guided Notes (pdf adapted from Tony Record), pages 11-15 Skill Builder WS 6.13	<ul style="list-style-type: none"> Evaluating improper integrals 	6.13
	Unit 6 Guided Notes (pdf adapted from Tony Record), pages 38-39	<ul style="list-style-type: none"> Selecting techniques for antidifferentiation 	6.14
	Additional Resources: <ul style="list-style-type: none"> Interactive notebook pages Unit 6 review (adapted from Tony Record) 		

Personalized Learning and Differentiation

Teachers differentiate by providing examples (work samples or task-specific clarifications of assessment criteria); structuring support (advance organizers, flexible grouping, peer relationships); establishing flexible deadlines, and adjusting the pace.

-SWD/504- Accommodations provided

-ELL- Five Principle ELL Curriculum Framework and Vocabulary Supports

-Intervention Support- Re-teaching Activities in Small Groups with Progress Monitoring

-Extensions- Enrichment Tasks and Projects

Resources

- AP Classroom (within AP Central, collegeboard.org)
- Calculus textbook: Calculus, 11e, Larson & Edwards
- Tony Record (Avon HS) created resources
- Khan Academy
- Delta Math
- Master Math Mentor (pdf files and videos)
- Teacher created resources