

2018 APSI Calculus AB Tentative Agenda

Monday

- Introductions (background & experience with AP, text book, calculator you use, goals for the week)
- AP Calculus 2017 Redesign (AP Calculus Framework, Mathematical Practices, test format)
- Philosophy & Goals for AP Calculus AB
- The Examination and sample questions
- **Limits & Continuity**
- **Rates of Change**
- Activities: Aquarium Problem, Limit Dominoes
- Module 3: Establishing Conditions for Definitions and Theorems (New FRQ)
- Using Graphic Organizers to Construct an Argument (IVT, MVT, EVT) Student Handout
- Quiz Trade Card Activity Student Handout
- HW Problems from AB Practice Exam in Handbook

Tuesday

- **Applications of the Derivative**
- **Implicit Differentiation & Related Rates**
- CED AB Sample Exam Questions (1, 4, 5, 14, 19)
- Demo Calculus In Motion (Define Derivative, Graph f tan der int, Inverse Function Derivative, Related Rates)
- L'Hospital's Rule (Advice for AP teachers: chapters 2 & 3)
- Activities: Matching Graphs & their Derivatives, Search & Rescue, Velocity-Acceleration-Speed, Chain Rule, Tarsia, Chain Rule Worksheet, Derivative Magic Square
- Practice: Related Rates and Finding the Derivative of an Inverse Function
- Module 2: Selecting Procedures for Derivatives (New FRQ)
- Free Response & Multiple Choice Practice
- HW Problems from AB Practice Exam in Handbook

Wednesday

- **Riemann Sums & Accumulated Rates of Change**
- **Average Value of a Function**
- **Functions Defined by Integrals & The Fundamental Theorem of Calculus**
- CED AB Sample Exam Questions (2, 3, 6, 7, 15, 16, 17, 18)
- Activities: Tarsia, Volumes of Solids with Known Cross Sections, Rates In & Out (Bats & Bees), FTC Matching
- The Next Big Idea of AP Calculus: The Definite Integral Student Handout
- Demo Calculus in Motion (Area Between Two Curves, Define Integration, Riemann, Volumes on Base, Volumes by Revolution)
- Module 1: Approximating Values and Functions (New FRQ)
- Module 4: Justifying Properties and Behaviors of Functions (New FRQ)
- Free Response & Multiple Choice Practice
- HW Problems from AB Practice Exam in Handbook

Thursday

- **Differential Equations, Slope Fields, & Euler's Method**
- CED AB Sample Exam Questions (8-12, 20)
- Demo Calculus in Motion (Theorems MVT & IVT & MVT Integral, Slopefield & Euler's Method)
- Practice Scoring 2018 Free Response Student Samples
- Activities: Reasoning from Tabular Data, The Integral Function, Oregon Water Consumption, Matching Slopefields, Matching Area & Volume
- Module 7: Applying Procedures for Integration by Substitution
- Module 8: Interpreting Context
- Interpreting Definite Integrals Student Handout