SCCS CURRICULUM MAP: TWELFTH GRADE

Subject	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Literature: Rhetoric & 20th Century Literature	Research & citation review Diction, clarity, and cohesion in • expository writing and speaking • persuasive writing and speaking Review of literary terms and Socratic dialogue skills Novel: *Out of the Silen Planet* C.S. Lewis	Review of Literary Romanticism, Realism, Naturalism, and short story examples of the same. Literary modernism Novel: *Heart of Darkness*, by Joseph Conrad	Poets Militant Early modernist poets and writers, including Eliot and Frost Novel: Begin *1984*, by George Orwell	Novel: *1984* by George Orwell Essays: G.K. Chesterton and C.S. Lewis

Senior Civics and Thesis **(second semester only)**	N/A	N/A	U.S. government concepts: • structure and content of U.S. Constitution • separation of powers • electoral process • legislative process • judicial review concepts and history Comparison/contrast of state and federal government & law Analysis of underlying worldview concepts: • rule of law • limits of law and government in fallen world • natural law and rights • positive vs. negative rights • rights vs. responsibility • nature and parameters of citizenship • liberalism • benefits vs. limits of democracy Major court decisions of 19th, 20th, 21st century Thesis background reading and research IF TIME: just war and total war concepts; U.S. international relations and worldview principles	Final research, writing, and presentation of senior thesis

Apologetics	Introduction to apologetics Biblical examples and model of apologetics Apologetic Method The Anatomy of unbelief	Classic arguments for existence of God Historical & Moral Reliability of Scripture	Problem of Pain, suffering, and evil	-Christianity among world religions

Math: PreCalculus *Pre-Calculus* (Glenco) Or	Preparing for Pre-Calculus; Chapter 1: Functions from a Calculus perspective; Chapter 2: Polynomial and Rational Functions; Chapter 3: Exponential and Logarithmic Functions	Chapter 4: Trig. Functions; Chapter 5: Trig. Identities and Equations; Chapter 6: Systems of Equations and Matrices	Chapter 7: Conic Sections and Parametric Equations; Chapter 8: Vectors; Chapter 9: Polar Coordinates and Complex Numbers	Chapter 10: Sequences and Series; Chapter 11: Inferential Statistics; Chapter 12: Limits and Derivatives
Math: Calculus *Calculus of a Single Variable* (9^{th} Edition)	Graphs and models, linear models and rate of change, functions and their graphs, fitting models to data (linear, quadratic, and trigonometric models), finding limits graphically and numerically, evaluating limit analytically, continuity and one-sided limits, infinite limits, derivative and tangent line problems, basic differentiation rules and rate of change, sine and cosine, product quotient rules and higher order derivatives, chain rule	Extrema of an interval, Rolle's Theory and the Mean Value Theorem, increasing and decreasing functions and the first derivative test, concavity and the second derivative test, limits at infinity, curve sketching, optimization problems, Newton's methods, differentials, antiderivatives and indefinite integration, area, Riemann sums and definite integrals, Fundamental Theorem of Calculus, integration by substitution (Trapezoidal Rule), numerical integration (Simpson's Rule),definition	Slope and Euler's method, differential equations: growth and decay, separation of variables and the logistic equation, first linear differential equations, area of a region between two curves, volume: the Disk and Shell Methods, arc length and the surfaces of revolution, work by a constant and a variable force, mass ad centroids, Theorem of Pappus, fluid pressure and fluid force, basic integration rules, trigonometric integrals, trigonometric substitution, partial fractions, L'Hopital's Rule and improper integrals	Sequences, series and convergence, *n*th-term test for divergence, integral test and the *p*-series, comparison of series (direct ad limit comparison tests), alternating series, ratio and root tests, Taylor polynomials and approximations, power series, Taylor and Maclaurin series, plane curves and parametric equations, polar coordinates and polar graphs, conics and Kepler's Laws, plane curves and parametric equations

		of *e*, natural logarithmic function: Differential and Function integration, inverse functions, exponential functions, bases other than *e*, inverse trigonometric functions, hyperbolic functions		

History: Great Ideas II: The 20th Century	Review of Western thought	Nineteenth Century philosophies Ideas of Modernity Causes and outcomes of WWI	Progressivism Eugenics Fuhrer principle Totalitarianism Communism	Post Modernism Critical Theory Biblical response to Modernism and Post Modernism

Physics *Conceptual Physics* (Prentice Hall)	Lab Safety, Scientific Method Review, -Mechanical Equilibrium: Force & Vectors -Newton's 1st Law of Motion – Inertia -Linear Motion: Speed, Velocity & Acceleration - Projectile Motion: Velocity Vectors, Projectiles -Newton's 2nd Law of Motion – Force & Acceleration -Newton's 3rd Law of Motion – Action & Reaction	-Momentum - Energy: Mechanical, Potential, & Kinetic, Work Energy Theorem - Circular Motion: Rotational Speed, Centripetal Force -Rotational Equilibrium: Torque, Center of Mass & Gravity - Rotational Motion: Rotational Inertia & Angular Momentum -Universal Gravitation: Falling Apple, Moon & Earth; Gravitational Fields -Satellite Motion: Earth Satellites, Orbits	-Special Relativity- Space & Time -Relativity-Momentum, Mass, Energy, & Gravity -The Atomic Nature of Matter: Atoms, Molecules, Compounds -Solids: Density, Elasticity -Liquids: Buoyancy, Flotation -Gases: Atmosphere, Boyle's Law, Bernoulli's Principle - Temperature, Heat, & Expansion: Specific Heat Capacity - Heat Transfer: Conduction, Convection, Radiation, Newton's Law of Cooling - Change of Phase: Evaporation, Condensation, Boiling, Freezing -Thermodynamics: 1st -3rd Law of Thermodynamics Newton's laws), surface gravity, escape velocity	Some or all of the following units: -Vibrations & Waves: waves & Doppler effect -Sound: origin & speed - Light: Concepts, speed, polarization -Color: Spectrum, Reflection, Atomic Color Code -Reflection & refraction: Laws of Reflection & relationships with sound, light -Lenses: converging & diverging; the eye Diffraction & Interference: Huygens' Principle; Young's Interference Experiment -Electrostatics: Coulomb's Law; Induction; Polarization -Electric Fields & Potential - Electric Current: Voltage, Ohm's Law, -Electric Circuits -Magnetism: Poles & Fields & Forces -Electromagnetic Induction: Faraday's Law, Transformers; -The Atom & the Quantum -The Atomic Nucleus & Radioactivity -Nuclear Fission & Fusion Einstein's Theory of Relativity, Twin Paradox, Telescopes, Cosmology, Looking back toward the beginning of the Universe
P.E.	Fitness Program	Fitness Program	Cotillion	Fitness Program

Music Classical & Folk Guitar	Training Your Ears & Playing Basics	More Majors & More minors	Pentatonic Scales	Keep On Keeping On
Art History **Cycle 1—one year** **Cycle 2—alternate year**	The Pre-classical World The Classical World The Renaissance to Baroque Neoclassical to Early Photography	The Christian World The Proto-Renaissance World Impressionism to Expressionism Cubism to Contemporary Art		