

Page-Turners & Big Ideas

11th Grade Quarter Two

English 11

Themes (Select one each for MP1 & MP2):

- Class in America
- Education and
- Learning
- Humor and Society
- Race, Culture, and Identity
- Stories of Place

Texts (will depend on theme selected): *A Hope in the Unseen, A Lesson Before Dying, A Place for Us, Adventures of Huckleberry Finn, All the Pretty Horses, Between the World and Me, Catch-22, China Men, Citizen Illegal, Counting Descent, Donald Duk, Eating Animals, Fences, Girl in Translation, The Heart of a Woman, House Made of Dawn, Hunger for Memory, I Know Why the Caged Bird Sings, Into the Beautiful North, Into the Wild, Invisible Man, Like Water for Chocolate, Little Fires Everywhere, Native Son, Nickel and Dime, The Nickel Boys, Notes of a Native Son, Outliers, Pilgrim at Tinker Creek, Roots, Seven Arrows, Song Yet Sung, Tell Me How It Ends, The Accidental Asian, The Alchemist, The Autobiography of Malcolm X by Malcolm X and Alex Haley, The Color of Water, The Glass Castle, The Great Gatsby, The Help, The Old Man and the Sea, The Other Wes Moore, The Shipping News, The Sirens of Titan, We Were Eight Years in Power, The Women of Brewster Place, Typical American, Walden*

- **Key Terms:** narrative, scene, inspiration, imagery, characterization, setting, plot, tone, mood, pacing, figurative language, symbolism, perspective, point of view, diction, connotation, denotation, style, rhetoric, persuasive techniques, ethos, pathos, logos, structure, voice, syntax, allusion,

Math

2Yr Algebra 2 AB

Unit 1: Functions and Their Inverses

- **Key Terms:** asymptote, end behavior, zero, factor, multiplicity, coefficient, polynomial, inverse, minimum, maximum, turning points, rational function, logarithmic function

***No core instructional textbook*

Algebra 2 and Honors Algebra 2

Unit 1: Functions and Their Inverses

- **Key Terms:** asymptote, end behavior, zero, factor, multiplicity, polynomial, inverse, minimum, maximum, turning points, rational function, logarithmic function

Unit 2: Polynomial and Rational Functions

- **Key Terms:** complex zeros, completing the square, quadratic formula, radical equations, real numbers, complex numbers, imaginary numbers, rational equation, extraneous solution, even function, odd function, polynomial division, polynomial, Remainder Theorem, Pythagorean triples, polynomial identity, factorization, Fundamental Theorem of Algebra

Precalculus and Honors Precalculus

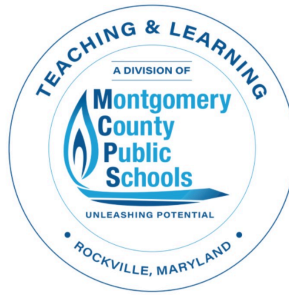
Unit 2: Exponential and Logarithmic Functions

- **Key Terms:** logarithms, properties of exponents, inverse, exponential functions, inverse relationships, asymptotes, Laws of Logarithms

Unit 3: Trigonometric Functions

- **Key Terms:** trigonometric functions, circular functions, cotangent, secant, cosecant, integral multiples, unit circle, circular motion, radian measures, symmetry (odd/even), periodicity, amplitude, cycle, vertical shift, midline, frequency

***MCPS uses two textbooks county-wide in Precalculus:*



Page-Turners & Big Ideas

juxtaposition, motif, central idea, theme, connection, synthesis, comparison, contrast, historical context, cultural context, credibility, bias, reliability, validity, source evaluation, annotated bibliography, citation, paraphrase, quotation, objective summary, argument, claim, counterclaim, reasoning, evidence, analysis, interpretation, interaction, integration, synthesis of ideas

**Please note: AP Language & Composition courses follow a different scope and sequence and may use texts listed on the supplemental text list for core instruction.*

- *"Precalculus: Graphical, Numerical, Algebraic," Addison Wesley, Copyright 2007*
- *"Advanced Mathematical Concepts," Glencoe, Copyright 2006*

Statistics and Math Modeling

Unit 4: Data Displays

- **Key Terms:** displays, measures of center and spread, qualitative, quantitative, frequency, dot plots, stem and leaf, histogram, box plot, IQR, range, standard deviation

Unit 5: Comparing Data Displays

- **Key Terms:** normal distribution, percentiles, z-scores, raw score

Unit 6: Regression

- **Key Terms:** scatter plots, residuals, residual plots, regressions, quadratic, exponential, power

***No core instructional textbook*

Honors Statistics

Unit 4: Probability

- **Key Terms:** Simulations, Law of Large Numbers, probability model, complement rule, mutually exclusive, conditional probability, correlation & causation

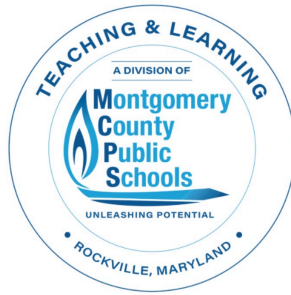
Unit 5: Random Variables

- **Key Terms:** discrete, sample space, expected value, probability, distribution, empirical, mean, standard deviation, random number generator

Unit 6: Sampling Distribution

- **Key Terms:** sampling distribution, sample statistic, population parameter, variability, randomness, dot plot, histogram, box plot, outliers, shape, center, spread, population mean, margin of error, simulation models, estimation process, confidence in estimates

***MCPS uses a countywide textbook for Honors Statistics, "Statistics and Probability with Applications," BFW, 3rd edition.*



Page-Turners & Big Ideas

Social Studies

Industrialization Leads to Empire Building

Students learn the causes of the Industrial Revolution. They examine why imperialism was a consequence of industrialization and how it was practiced differently around the world. Students learn about how global interaction increased as a result of imperialism.

- **Key Terms:** Industrial Revolution, urbanization, capitalism, communism, Marxism, socialism, Social Darwinism, paternalism, economic imperialism, Monroe Doctrine, Roosevelt Corollary, Berlin Conference, Boer War, caste system, indentured servant, Tanzimat Reforms, Crimean War, Decembrist Revolt, Meiji Era, Sino-Japanese War, Russo-Japanese War, Opium War, extraterritorial rights, Taiping Rebellion, sphere of influence, Boxer Rebellion

Global Competition through World War I

Students learn how Western competition led to a global war that utilized new weapons, civilians, and colonies. They also examine the role of the Russian Revolution during World War I and how cooperation established peace at the end of the war.

- **Key Terms:** Causes of World War I, trench warfare, World War I war technology, total war, propaganda, rationing, conscription, Russian Revolution of 1905, Communist Party, Paris Peace Conference, Woodrow Wilson's Fourteen Points, Treaty of Versailles, League of Nations, self-determination

** No core instructional textbook.

Note: Social Studies standards are integrated throughout the unit. The standards are History, Civics, Peoples of the Nations and World, Economics, Geography, and Social Studies Skills.

Science

Biology

Students will study how the rapidly growing human population impacts the flow of matter and energy on Earth, with a focus on the balance between human needs and the planet's resources. They will also explore how sustainable practices can reduce negative effects and support life for future generations.

Key terms: Energy flow, matter cycling, population growth, carrying capacity, biodiversity, human impact, sustainability, climate change, resources

Astronomy with Physics

Unit: Comparative Planetology

In this unit, students will explore the planets and objects within (and outside) our solar system. Students will apply their understanding of the flow of energy and matter to explain processes of and features of Earth and other planets.

Key terms: patterns, radioactive decay, isotopes, planetary geology, inner/outer planets, habitability, tilt, electromagnetic radiation, geologic time, waves, resonance, wavelength, frequency, earthquakes, thermal energy, greenhouse effect, meteors, collision

Earth Systems and Sustainability

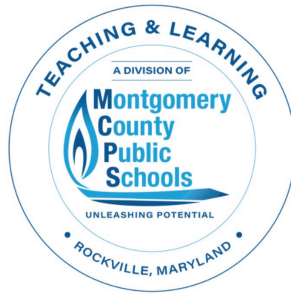
Unit: Geosphere and Earth's History

In this unit, students explore the phenomenon of earthquakes, continental drift, and volcanic activity.

Key terms: tectonic processes, epicenter, focus, energy, hazards, waves, P-waves, S-waves, seismograph, geosphere, inner/outer core, mantle, crust, lithosphere, convection, divergent and convergent boundary, subduction, transform, mid-ocean ridge, volcano, mountain, erosion, sediment, crater, meteorite, impact.

Chemistry A

Unit: How Does Water Move Matter?



Page-Turners & Big Ideas

	In this unit, students identify molecules and connect molecular structure to properties of matter. They investigate solutions and explore water's effects on Earth's systems. Key terms: molecules, polar/non-polar, atomic structure, electrical forces, periodic table, composition, properties (including hardness, conductivity, polarity, melting point, and more), kinetic energy, solutions, sinkhole, solubility, physical/chemical weathering Physics A Unit: Forces at a Distance and Energy Conversion In this unit, students use mathematical models to describe and predict the effects of gravitational and electrostatic forces between distant objects. Students investigate the relationship between magnets or changing electric fields and magnetic fields; electric charges or changing magnetic fields and electric fields. Students explore how attraction and repulsion between electric charges at the atomic scale explain the structure, properties, and transformations of matter. Key terms: gravity, electrostatic forces, Newton's Laws, electric fields, energy- kinetic, thermal, potential, energy transformations, magnetism, magnetic field, attraction, repulsion, conservation of energy <i>**No core instructional textbook</i>
--	--

[These](#) supplemental instructional materials might also be included in 11th grade. Supplemental materials are additional approved books for teachers to use to teach a topic. If any listed instructional material conflicts with your family's sincerely held religious beliefs, you may request your child's excusal by submitting [this request form](#). For additional information, visit [our website](#).

Families: Put this on your refrigerator and review at home!