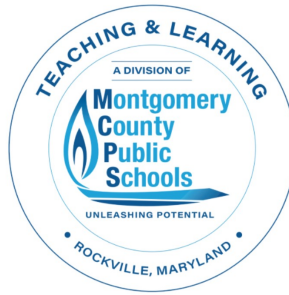


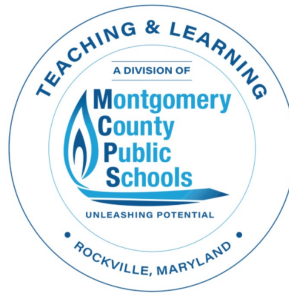
Page-Turners & Big Ideas
10th Grade
Quarter Two

English 10 Unit 2: Argument & Rhetoric How do stories shape our thinking? Anchor Texts: <i>1984</i> by George Orwell, <i>Kindred</i> by Octavia Butler, <i>Fahrenheit 451</i> by Ray Bradbury <i>*Note: Teachers choose one or more of the anchor texts to use during each unit.</i> Key Terms: claim, counterclaim, evidence, reasoning, commentary, thesis, argument, rhetoric, rhetorical appeals, ethos, pathos, logos, tone, diction, syntax, connotation, denotation, bias, perspective, credibility, audience, purpose, refutation, coherence, cohesion, transition, structure, speculative fiction, utopia, dystopia, social commentary, theme, motif, symbolism, inference, analysis, revision <i>*Please note: AP Seminar: English 10 courses follow a different scope and sequence and may use texts listed on the supplemental text list for core instruction.</i>	Math Algebra 1 Unit 4: Functions Key Terms: function notation, linear function, decreasing function, horizontal intercept, vertical intercept, piecewise function, absolute value, inverse function Unit 5: Introduction to Exponential Functions Key Terms: growth factor, exponential function, growth rate <i>**The Board of Education adopted the mathematics curriculum, “Illustrative Math” by Imagine Learning.</i> Geometry/Honors Geometry Unit 2: Congruence Key Terms: corresponding, auxiliary line, parallelogram, converse, rectangle, rhombus Unit 3: Similarity Key Terms: dilation, scale factor, similar, altitude <i>**The content for the student workbooks is sourced from the Illustrative Math curriculum.</i> 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,
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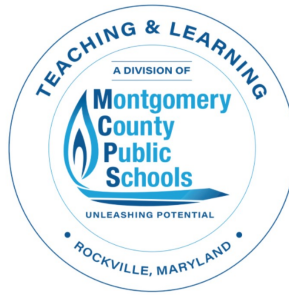
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	real numbers, complex numbers, imaginary numbers, rational equation, extraneous solution, even function, odd function, polynomial division, polynomial, Remainder Theorem, Pythagorean triples, polynomial identity, factorization, Fundamental Theorem 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 <i>**MCPS uses two textbooks county-wide in Precalculus:</i> • <i>"Precalculus: Graphical, Numerical, Algebraic," Addison Wesley, Copyright 2007</i> • <i>"Advanced Mathematical Concepts," Glencoe, Copyright 2006</i>
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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?	Social Studies Structures and Powers of the U.S. Government Students learn the types of government, analyze the foundational principles of government that influence the structure and function of government, legislative and executive branches, and government responses requiring cooperation between different levels and branches of government. • Key Terms: Limited Government, Federalism, Separation of Powers, and Checks and Balances Participation in the Political Process Students analyze the foundational principles of government, participation in a democracy, voting, political parties, media, and groups that influence government policy and public opinion, and analyze the processes, structures, and influences on American elections. • Key Terms: Representative Democracy, Majority Rule, Consent of the Governed, and Popular Sovereignty <i>** No core instructional textbook</i> 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. Social Studies • Ancient Egypt ◦ <i>my World Social Studies</i>, by Pearson ◦ <i>A Long Walk to Water</i>, by Linda Sue Park (Global Humanities 6 Only)
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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

***No core instructional textbook*

[These](#) supplemental instructional materials might also be included in 10th 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!