

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

Traits Exhibited by Many Fifteen to Eighteen-Year Olds

All children develop differently, but you may notice the following traits as your child attends Tenth, Eleventh, or Twelfth Grades.

- Want to earn money for independence and freedom
- Desire increased responsibility
- Need to be treated as young adults
- Occasionally revert to childish behavior
- Are very critical of self
- Seek prestige and belonging to the power group
- Are able to concentrate and specialize in selected skills and interests
- Have expansive and changing ambitions
- Are encountering a conflict between idealism and materialism
- Develop crushes with depth of feeling
- Tend to cover own weaknesses with similar weaknesses of the group

Core Teachers: Grades 11-12

English/Language Arts:

Ann Kedrowski, Dana Busby, Anna Kaiser, Robert Bach, Katie Maier, Deidre Bradford

Mathematics:

Todd Felch, Leslie Felch, Dan Stratton, Cody Roggenbauer, Bob Isberner, Hannah Bohrtz

Science:

Dick Lind, Cody Roggenbauer, David Ley, Tom Fitzgerald, Margo Smith

Social Studies:

Bethany Schaefer, Kelly Bauman, Amanda Bieri, John Holbrook, Tom McCarty

Special Education:

Kathy Klingenberg, Angie Lloyd, Mary Savage, Tammy Koskey, Sue Brandt, Joe Kell, Natalie Kell, Melissa Jirgl, Christine Ruchti

- Work independently to a greater degree as the school year progresses
- Use time productively
- Make plans and organize before working
- Work quietly when directed
- Complete work in a timely manner
- Evaluate own work
- Self-assess own progress
- Use personal technology responsibly

All English Language Arts Courses

- Use language to convey appropriate messages
- Listen when others are speaking
- Contribute ideas to discussions
- Read books for information and enjoyment
- Compare and contrast authors, genre, or like literature selections
- Support opinions with factual information
- Recognize the use of slanted language used to present a particular view
- Read a variety of genre: short stories, plays, novels, poetry
- Write well developed and organized paragraphs and essays
- Orally summarize fiction and non-fiction after reading
- Know and apply the uses of punctuation
- Apply knowledge of parts of speech, subject-verb agreement, and verb tense
- Recognize that words may have different contextual meanings
- Present oral reports and speeches
- Understand the importance of word choice in conveying a message and relating to an audience
- Develop note-taking skills
- Spell most words correctly
- Self-assess writing according to the 6-Traits model
- Use writing process to plan and create written work
- Increase written and spoken vocabulary
- Use computers to organize and communicate information

English 11

- Read and discuss literature that describes America's historically diverse populations
- Read and discuss American novels (The Adventures of Huckleberry Finn, The Crucible)

- Connect readings to US History
- Understand literary movements through reading and analyzing American short stories
- Understand literary terms (style, mood, figurative language)
- Develop skills in expository and creative writing
- Write an MLA research paper based on persuasion or primary research
- Create and deliver a speech
- Apply the study of word roots/families to vocabulary enrichment
- Read and interpret American poetry
- Write college and career applications, essays, and resumes

Oral Communication

- Understand the communication happens in intended and unintended ways
- Learn about nonverbal communication
- Learn to be an active listener
- Research a topic using print and digital resources
- Prepare and deliver a demonstration speech
- Prepare and deliver informative speeches
- Perform oral interpretation and storytelling speeches
- Develop cooperation and accountability skills
- Provide constructive feedback to speakers
- Understand the appropriate use of formal and informal English

Introduction to Film

- Understand historical and cultural changes and issues
- Analyze how film chronicles our changing world
- Understand the process of making a film
- Refine note taking skills
- Compare and contrast film presentations and techniques
- Learn to write a critical analysis
- Learn to formulate opinions with support

Different Voices

- Examine cultural issues through writings by multicultural authors: Langston Hughes, Alice Walker, Chinese poetry, Hmong essays, Native American writing, and Elie Wiesel

Self-Directed Learning

- Follow school and classroom rules
- Use self-control
- Show respect for others
- Work to solve own problems
- Work cooperatively with others

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

- Write personal reflections of literature studied
- Evaluate research sources
- Write an I-Search paper
- Annotate texts
- Formulate discussion questions
- Write reports analyzing a combination of works and/or resources
- Present oral reports

Research and Composition

- Guide personal research and writing through the use of a thesis statement and an outline
- Use a variety of library resource materials
- Use various web browsers and data bases to modify and focus web searches
- Transfer graphics, pictures, and video clips into student-made documents
- Demonstrate note-taking skills
- Demonstrate proper citation of resource materials using MLA & APA styles
- Produce research papers
- Write persuasive essay /argument supported with evidence
- Understand the differences between MLA and APA styles

AP English

- Learn to be an active reader
- Read and analyze a variety of classic works of literature with depth of study emphasized
- Read and analyze Ethan Frome and Candide describing the author's use of literary conventions and devices
- Self-select reading from a suggested AP list of reading
- Read and analyze Shakespeare's Macbeth
- Write a research-supported argument
- Read and analyze a variety of poetry
- Develop persuasive writing skills, specifically effective rhetorical strategies, clear and effective use of citations/support, insightfulness, mature style, variety in syntax and a strong working vocabulary
- Develop skill of writing well under pressure of time constraints
- Develop confidence in interpretive skills as they are applied to unfamiliar texts

- Develop strategies to confidently answer multiple choice questions about literature

All Math Courses

- Apply common sense and probability of result to all work
- Understand how math is essential in real life including career choices
- Compare real numbers
- Understand and use ratios, proportions, percents, rates of change
- Manipulate numbers and compute using appropriate operations
- Explain orally and in writing numerical operations and procedures
- Use technology to carry out computations
- Use geometric models to describe relationships and solve problems
- Use appropriate measurement tools
- Measure using estimation and reasoning
- Know and use geometric formulas
- Read and use data in graphs and tables
- Use critical reading, writing, and thinking skills

Algebra 1B (See Algebra 1)

Algebra 1 and Algebra 1B

- Simplify expressions using number properties and combining like terms
- Know and use the definition of an exponent n , either positive or negative
- Know that a non-zero number to the zero power is one
- Understand and use negative and positive numbers and even and odd powers
- Be able to multiply exponents
- Convert decimal numbers to and from scientific notation
- Use a scientific calculator
- Maintain equivalence of an equation throughout number operations
- Expand binomials
- Factor expressions
- Interpret geometrical problems and put in equation form
- Know the concept of slope
- Understand and use a function
- Use proportion to calculate for an unknown quantity
- Calculate frequencies

- Solve quadratic equations
- Solve linear equations
- Solve equations with more than one variable
- Understand sine, cosine, and tangent ratios
- Understand the properties of triangles

Geometry

- Classify angles
- Use and understand perpendicular lines and planes
- Construct indirect and direct proofs
- Understand congruent angles
- Classify Triangles
- Classify Polygons
- Understand similarity of proportion
- Use square roots
- Use the Pythagorean Theorem
- Understand and use circles, segments, and arcs
- Figure surface area of prisms, cylinders, cones, spheres
- Calculate and graph slope of lines

Algebra 2 and Algebra 2 Accelerated

- Creating graphical solutions of simultaneous equations
- Understand and use scientific notation
- Understand and use radicals
- Understand and use roots of quadratic equations including complex roots
- Understand properties of real numbers
- Understand and use advanced factoring
- Understand inequalities and systems of inequalities
- Understand and use logarithms and antilogarithms
- Understand and calculate conic sections
- Calculate using exponential equations
- Understand and use basic trigonometric functions (**Alg 2 Accelerated only**)
- Understand and apply the algebra of polynomials
- Understand vectors in polar and rectangular form
- Understand and interpret algebraic word problems
- Understand matrices and use matrices to solve problems

Practical Geometry

- Classify angles

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

- Use and understand perpendicular lines and planes
- Understand congruent angles
- Classify Triangles
- Classify Polygons
- Understand similarity of proportion
- Understand and use the Pythagorean Theorem
- Construct logical and sequential proofs
- Apply geometry knowledge to actual situations
- Understand how geometry is used in career choices

Algebra 3

- Review and practice all concepts taught in Algebra 1, Geometry, and Algebra 2
- Understand and use basic trigonometric functions

Life Skills Math (Seniors only)

- Understand different ways to earn money and ways to get paid
- Understand buying food
- Understand managing a household
- Understand buying and maintaining a car
- Understand improving your home value
- Understand the costs of the different ways to travel
- Understand budgeting your money
- Understand different banking and investment practices
- Learn how to pay taxes

Introduction to Programming: Java

- Learn the principles of computer programming
- Learn the capabilities of Java platform
- Learn the syntax of object-oriented language
- Create applications with graphics
- Create applets and servlets
- Create a computer game
- Find the distance between two points

Pre-Calculus

- Understand the trig functions based on the unit circle
- Understand functions and their graphs
- Relate the unit circle to the graphs of the six trig functions
- Understand poly and rational functions
- Understand right triangle trigonometry

- Understand the difference between radians and degrees, and convert from one to another
- Use various trig formulas and Identities
- Use calculators to evaluate trig functions
- Graph the six trig functions and their inverses
- Understand limits
- Understand techniques used in solving limits
- Solve equations involving trig functions, including the laws of sines and cosines
- Find the area of circular sectors and segments
- Understand arithmetic and geometric sequences and series
- Understand sigma notation
- Understand exponents, logarithms, and functions involving them
- Solve problems involving probability
- Understand what a matrix is, what a matrix can be used for, and what operations can be performed on a matrix

Advanced Placement Calculus (AP)

- Understand all concepts covered in Pre-Calculus
- Understand and use polar coordinates
- Understand and apply the concepts of limits
- Take derivatives using several different methods
- Apply the properties of functions
- Find definite and indefinite integrals
- Apply the use of derivatives to real-world problems
- Review for the AP Calculus examination

Probability and Statistics

- Review and apply Algebra concepts
- Use a graphing calculator to display data
- Understand measures of central tendency
- Understand variation and expected value
- Understand and apply rules of probability
- Understand statistical sampling
- Understand statistical models
- Understand and determine standard deviations
- Understand and determine standard error of measurement

- Understand the concepts of correlation and regression
- Understand statistics using two variables

All Science Courses

- Understand that the themes of science affect everyday life and decisions
- Understand how scientific themes and theories can apply to future conditions and situations
- Understand that conflicting assumptions can lead to different conclusions and decisions
- Understand that science investigations have increased human knowledge
- Know how cultures and individuals have contributed to scientific knowledge
- Know how basic research and applied research have contributed to new discoveries
- Understand the scientific method of observation, investigation, data collection, and hypothesis
- Read and evaluate scientific articles of timely import
- Present results of investigations to groups/individuals concerned with the issues
- Use critical reading, writing, and thinking skills

Biology

- Identify chemical reactions related to physical functions and environmental changes
- Understand single and multi-celled organisms
- Understand how cells differentiate and self-regulate
- Understand and explain theories of molecular and genetic heredity
- Understand the theory of evolution, natural selection and biological classification
- Explain how species have changed and how species have attained diversity
- Explain how organisms cooperate and compete in the ecosystem
- Understand the impact of energy on organisms in living systems
- Devise a scientific solution to a community or environmental problem
- Know how cultures and individuals have contributed to scientific knowledge

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

- Understand the scientific method of observation, investigation, data collection, and hypothesis
- Describe how science has expanded human knowledge and application of genetics

Honors Biology

- Evaluate cell structures and functions
- Understand how cells differentiate and are regulated
- Understand the neuro-muscular system of the human body
- Understand the cardiac system of the human body
- Understand the construction and function of the ears and eyes
- Understand the integumentary (body's protective) system
- Understand the body's reproductive and development systems
- Learn the history of microbiology
- Understand prokaryotic cells
- Understand the biochemistry of microorganisms
- Understand the science of immunology
- Perform lab tests using standard practices
- Interpret lab results using standard reporting procedures
- Investigate how microbiology contributes to our body of knowledge

Chemistry

- Describe atomic structure and the properties of atoms
- Explain how substances interact with one another to produce new substances
- Use patterns in physical and chemical properties to predict likely chemical changes
- Understand intermolecular forces
- Explain exchanges of energy in chemical reactions and exchange of mass and energy in nuclear reactions
- Use critical reading, writing, and thinking skills
- Gain a basic understanding of organic chemistry, including the alkanes, alkenes, and alkynes
- Investigate/learn laboratory techniques unique to organic chemistry
- Know and understand the structure and nomenclature of organic compounds

- Investigate reactions of organic compounds
- Discuss and describe how organic compounds affect our lives and environment
- Describe how science and technology affect decisions made in our government policies

Advanced Placement Physics (AP)

- Analyze motion of objects and the forces that produce this motion
- Investigate gravitational forces and how these forces impact on the universal system
- Investigate models of heat energy and the behavior of this energy form
- Investigate mechanical wave models and the transfer of energy by these forms
- Investigate models of light energy and describe the behavior of energy form
- Describe models of electromagnetic forces and the behavior of these forces
- Evaluate articles and reports presented in popular and scientific journals

Honors Chemistry/Lab

- Gain a basic understanding of inorganic chemistry
- Utilize basic laboratory techniques to collect data
- Understand appropriate methods of analyzing and reporting data collected in the laboratory
- Study and understand the chemistry of solutions
- Understand how a change in solute affects a solutions properties
- Use group problem-based learning to gain understanding of systems at equilibrium
- Gain an understanding of the physical states of matter
- Use group problem solving techniques to arrive at a procedure to solve scientific questions
- Utilize understanding of systems at equilibrium in a wide-range of applications
- Apply a general knowledge of chemistry applicable to the day-to-day life of students
- Gain an understanding of oxidation-reduction reactions and their implications in technology

All Social Studies Classes

- Understand that social studies involves the study of history, geography, political science, economics, peoples, cultures, and social sciences such as anthropology, sociology, and psychology
- Use atlases, maps, and globes to locate regions and collect data
- Construct mental maps, recalling major physical features
- Understand that environment affects people and culture
- Understand that history affects the present and future conditions of cultures, people and countries
- Learn about important people and their contributions to history and/or the present
- Understand different cultures or eras and the corresponding political systems
- Participate in group projects
- Present information orally and in writing
- Contribute to discussions with relevant information and opinions
- Use critical reading, writing, and thinking skills

Government

- Be introduced to the foundations of government (liberty, equality, justice, power) as identified in the Declaration of Independence, Articles of Confederation, Constitution, the Bill of Rights, and the Constitutional Amendments
- Understand the three branches of American government, the separation of powers and duties of each in a multi-purpose democracy
- Know and evaluate the implications of certain rights and responsibilities of citizens that are both used and abused historically and in modern times
- Understand the basics of state and local government, including ways people participate in community affairs and the American electoral process
- Evaluate the means through which advocates influence public policy, public opinion, and political party politics
- Explore different political systems

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

US History (Advanced Placement)

- Refine knowledge of early US history: colonization and rebellion
- Refine knowledge of the Constitution and Bill of Rights and evolution of interpretation over time
- Learn about various presidents and their influence in history
- Extend knowledge about slavery, Manifest Destiny, and the Civil War
- Extend knowledge of the Reconstruction Period and its influences today
- Understand US relationships to other countries
- Understand the expansion into the western territories, the economic results and the effect on Indian tribes
- Understand the role of immigrants into the US
- Understand the historical course from agrarian to industrial economy and the societal results
- Understand the events leading up to and the ramifications of WWI and WWII
- Understand the reasons for and the consequences of the Cold War
- Understand how economic downturns or up-turns have affected US laws and policies
- Understand the events leading up to and the ramifications of the Viet Nam War
- Understand the ramifications of the Watergate investigation
- Conduct research and prepare a written presentations on a selected topic using MLA citations

History in Media

- Analyze primary and secondary sources related to historical events
- Gather data to determine point of view presented in media
- Assess the validity of different interpretations of historical events
- Understand stereotyping and how it can distort history
- Compare and analyze political cartoons
- Describe how media affects world response to calamities and disasters
- Present written research on a self-selected topic

World Cultures A

- Learn about the Middle East and South Asia

- Analyze examples of ongoing change within these regions
- Understand the origins and central ideas of religion in these regions
- Analyze primary and secondary sources related to historical and cultural events
- Use geographical information to examine trade and natural resources
- Examine political and societal organizational structures
- Understand the economical structure of these regions

World Cultures B

- Learn about Northern Eurasia (Russia and former Soviet Bloc countries)
- Learn about the countries of Southeast Asia
- Analyze examples of ongoing change within these regions
- Understand the origins and central ideas of religion in these regions
- Analyze primary and secondary sources related to historical and cultural events
- Use geographical information to examine trade and natural resources
- Examine political and societal organizational structures
- Understand the economical structure of these regions

Environmental History

- Understand that environment affects people and culture
- Analyze how different ecosystems have affected societies and economics
- Understand how changes such as population growth, urbanization, and resource use affect laws and policies
- Identify and evaluate how social and political movements have and can influence public policy
- Learn about conservation and preservation movements and their influence on laws and public policies

Economics

- Compare, contrast, and analyze different types of economics and economic systems, exploring how they have been affected by specific social and political systems and historical events
- Explain basic economic terms and concepts that comprise

microeconomics (supply, demand, prices, production, distribution, and consumption) and how these are part of market structures

- Explore the sources of capital in economic systems and business organizations, both historically and in the present
- Understand the elements of macroeconomics, the analysis of economic performance, and the federal budgetary and monetary policies
- Explain the operations of common financial instruments (such as stocks and bonds) and financial institutions (credit companies, banks, and insurance companies)
- Analyze and evaluate the role of the United States in the world economy in the age of global interdependence and competition

Sociology

- Understand the brain's structure and function influence learning and behavior
- Learn how many factors contribute to a person's identity
- Understand how different cultures define individual rights and responsibilities
- Examine how various cultural institutions and organizational structures cause groups of people to stay the same or to change
- Understand how people with like interests or shared values can have influence over events or others
- Use the scientific method to conduct research
- Understand how cultures resolve differences
- Understand characteristics of ethical research

Psychology

- Understand the brain's structure and function influence learning and behavior
- Learn how many factors contribute to a person's identity
- Identify factors that contribute to a person's mental health
- Conduct research according to best practice to form an opinion about an issue
- Investigate topics such as motivation, perception, memory, creativity, and learning theory
- Investigate mental disorders

Parents' Guide to Eleventh and Twelfth Grades: Core Subjects

This school year your child will learn to:

Information and Technology

- Use software to organize thoughts for written work
- Keyboard accurately at 30-45 wpm
- Use scanner, digital camera, and other digital equipment
- Produce word processing documents, spreadsheets, databases, PowerPoint, and drawing products
- Use various web browsers to modify and focus web searches
- Transfer graphics, pictures, and video clips into student-made documents
- Use a variety of library resource materials
- Demonstrate proper citation of resource materials used
- Learn to assess one's own progress and quality of work
- Use personal initiative and time management skills to complete projects on time
- Work with a group to complete a project
- Use anti-plagiarism strategies
- Participate in blended learning courses
- Produce digital video projects
- Use library catalog
- Use library web page
- Use Boolean search strategies
- Use advanced database and Internet features
- Understand the meaning of copyright and fair use
- Demonstrate safe use of the Internet
- Understand the purpose of Wikis and Blogs
- Recognize and use primary documents
- Evaluate resources
- Understand bias and opinion