

### **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

### **This year your child will learn to:**

#### **Self-Directed Learning**

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

#### **All English Language Arts Courses**

- Use language to convey appropriate message
- Listen when others are speaking
- Contribute ideas to discussions
- Analyze literature in terms of character, plot, setting, conflict, theme
- Make predictions about a variety of texts
- Read self-selected 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
- Write stories, personal thoughts, letters, essays, research reports, poetry or react to reading
- 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 10**

- Skim and scan for information
- Write English/Biology research paper
- Use correct reference citations in body and bibliography
- Create magazines to entertain, inform, and persuade

- Write memos
- Understand plagiarism and copyright infringement
- Read classic and contemporary literature (Julius Caesar, To Kill a Mockingbird, Twelve Angry Men, and other self-selected authors)
- Connect literature selections to history, culture, and personal experiences

### English Skills 10

- Skim and scan for information
- Write summaries
- Write English/Biology research paper
- Correctly cite sources, showing understanding of plagiarism
- Read classic and contemporary literature (King Arthur legend, William Saroyan)
- Study the history of English (Greek & Latin roots) and apply to vocabulary studied
- Read at least one novel as a class
- Develop skills in practical reading and writing

### 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

### Algebra B

- Understand and use inequalities
- Understand and use systems of equations
- Multiply monomials and polynomials
- Factor expressions
- Graph quadratic functions
- Solve quadratic and exponential equations
- Simplify rational expressions
- Use the Pythagorean Theorem
- Simplify and solve radical expressions
- Find the distance between two points

### Algebra 1

- 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**

- 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
- 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

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

## **Global Studies**

- 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
- Research a topic and present relevant data and conclusions to the class or teacher
- Participate in group projects
- Present information orally and in writing
- Contribute to discussions with relevant information and opinions
- Identify diverse belief systems around the world
- Be able to discuss the implications of industrialization, urbanization, and population growth
- Learn about basic human rights across the globe

## **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 work 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
- Choose appropriate library materials
- Care properly for library materials and equipment
- Use a variety of library resource materials
- Demonstrate note-taking skills
- Demonstrate proper citation of resource materials used
- Learn to assess one's own progress and quality of work