

Grade 12

Course Descriptions

Elements of Language

This extensive course explores every grammatical structure or category which needs to be mastered by grade 12. It continues to enrich students' knowledge with reflexive and intensive pronouns, discusses the ambiguous, general, weak, and indefinite reference of pronouns, teaches on phrases and clauses used as modifiers, covers the principal parts, tense, voice, and mood of the verb, independent and subordinate clauses, functions of different kinds of phrases, correct usage of modifiers, punctuation, and spelling rules. The writing and communication part focuses on harnessing students' imagination, comparing and contrasting media, defending a position, reviewing a documentary, recommending solutions, and researching literary subjects.

Resource – *Elements of Language, Holt, 2009*

British Literature

This brilliant course on British Literature takes students on a journey from the Anglo-Saxon times to the contemporary issues and ideas. Reading through the stories of the Geats warrior Beowulf, the Medieval romances of King Arthur and his Knights of the Round Table, Chaucer's "Canterbury Tales", Medieval ballads about Robin Hood, Renaissance pastoral poems and sonnets, Shakespeare's masterpiece "Macbeth", or humanistic essays by Francis Bacon brings to the students' attention timeless questions like "What makes a true hero?", "Who really shapes society?", "Does fate control our lives?", "Can people live up to high ideals?", "Why do people seek power?", "Should religion be tied to politics?" The Restoration period, Daniel Defoe, Joseph Addison, Jonathan Swift and their "Robinson Crusoe", "Gulliver's Travels", and "The Spectator" brings about new questions "Can science tell us how to live?", "What is a woman's role in public life?". The Romantic poets Blake, Wordsworth, Byron, Shelley, Keats etc., the Victorians Charles Dickens, the Bronte sisters, Tennyson, Robert Browning, and the Modern and Contemporary literature authors Oscar Wilde, T. S. Eliot, Joseph Conrad, George Bernard Shaw, George Orwell and Winston Churchill present students with an unforgettable experience with the development of human thought, ideas, society and values. The writing workshop includes analysis of a poem and a literary non-fiction, critical review, a persuasive essay, and job interviews.

Resource – *British Literature, Holt McDougal, 2010*

Advanced Mathematics

This course is an upgrade to the earlier course of Algebra 2. It is designed to teach the concepts and skills necessary for students to succeed in advanced math and in disciplines that are mathematically based like physics, chemistry, economics, social sciences and many others. The course focuses on introducing important mathematical concepts through the development of mathematical techniques. The intention is to introduce students to those concepts in a comprehensible and coherent way. The syllabus follows an extensive review of core math branches like algebra, geometry, trigonometry, and analytical geometry. Other topics as probability, combinatorics, regression analysis, etc. will be covered as well. Emphasis is placed on problem solving and applications in real life and technology. In more detail, the topics taught include, but are not restricted to, solving equations and inequalities; graphing functions and equations; dealing with linear, quadratic, polynomial, exponential, logarithmic, and trigonometric functions and equations; solving systems of equations and inequalities. When necessary, computer lab simulations/analysis will be performed to illustrate the math relationships.

Resource: *Advanced Math, Saxon, Third Edition*

Economics

In this course a student will be able to understand the fundamental principles of Economics. The course is derived from the NCEE and its network of affiliated councils and centers, and has endorsed to meet the standards of the following guide in economics instruction in American schools. The twenty standards are summarized briefly below.

Standard 1: Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

Standard 2: Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something; few choices are all-or-nothing decisions.

Standard 3: Different methods can be used to allocate goods and services. People, acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

Standard 4: People respond predictably to positive and negative incentives.

Standard 5: Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

Standard 6: When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

Standard 7: Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

Standard 8: Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

Standard 9: Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

Standard 10: Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.

Standard 11: Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

Standard 12: Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, thus affecting the allocation of scarce resources between present and future uses.

Standard 13: Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.

Standard 14: Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure.

Standard 15: Investment in factories, machinery, new technology, and the health, education, and training of people can raise future standards of living.

Standard 16: There is an economic role for government to play in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.

Standard 17: Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.

Standard 18: A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.

Standard 19: Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. By creating uncertainty about future prices, inflation can reduce the rate of growth of national living standards.

Standard 20: Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

Resource – *Economics, Holt*

Physics

The course offers a conceptual foundation and a mathematically-based presentation of physics. At the same time it gives students a lot of practice, working with both fundamental physical concepts and problem-solving skills. The syllabus follows an extensive review of core physics content like forces and laws of motion, work and energy, momentum and collisions, circular motion and gravitation, fluid mechanics, heat and thermodynamics, vibration and waves, sound, light reflection, refraction, interference and diffraction, electric forces and fields, electrical energy and current, magnets, magnetic force and magnetic fields, atomic and subatomic physics. Each new topic is presented in relation to the knowledge already gained by students in everyday life. Special emphasis is given to introduction and understanding of fundamental physical concepts. Linking concepts to practical examples is then a mandatory step in pursuing the students' comprehension of the surrounding world. Additional research projects (including a science fair project) and labs are given to extend students understanding of the physical phenomena.

Resource – *Physics, Holt*

Psychology

AEA is *Psychology* Course in AEA teaches a curriculum which covers the area of fundamental concepts and ideas in psychology, their historical roots and a wide range of contemporary scientific approaches. The topics included are representative of the core assumptions and theories, as well as the specific terminology that shapes the further understanding of the distinctive language discourse of the subject matter. Students will be introduced to the specific details and analysis of human behavior in relation to biological, sociological and cultural dimensions.

As a general education two-term course, Psychology classes recognize a certain number of aims and goals, which are as follows:

- to provide a broad conceptual knowledge and understanding of primary theoretical principles within this discipline;
- to introduce students to certain methods and strategies for empirical investigation used in psychology;
- to help students learn how to identify main ideas and details within the subject matter;
- to train students in drawing conclusions on basis of identifying, interpreting and analyzing problems and solutions in specific cases;
- to give students the opportunity to work with statistics, primary and secondary sources of empirical data, charts and thematic maps;
- to train students in evaluating information;
- to encourage students to develop what is referred to “critical thinking” – questioning hypothesis, arguing theories and forming opinions based on facts, observation and analysis.

Classes consist of a review of the themes introduced in the textbook as well as emphasis on the notably complex details. Also, specific case studies, experiments, demonstrations and research broaden the acquired knowledge. Students will have the opportunity to demonstrate their critical approach to certain problems in psychology in essays and projects, while their conceptual understanding and ability to work with specific data will show on taking tests.

Resource – *Psychology, Holt*

Spanish (Elective)

The course introduces students to the effective learning of a new foreign language. The organization, sequencing and distribution of contents follow the policy established by the European Language Framework and the Curriculum Plan of Institute Cervantes. Both documents represent the core of the concept and are applied to the School’s context, and to the cognitive development and motivation of the students.

By the end of the course students are expected to develop skills corresponding to A2+ level, i.e. they will be able to understand oral and written texts in the past and talk about past events. Also the students be able to use the future and imperative for orders, instructions and suggestions. The methodology aims to develop the communicative competence of the learners and fosters their four language skills. It supposes a lot of active participation, sometimes it combines with cross-curricular techniques.

Physical Education (Elective)

The purpose of this course is to provide students with the knowledge, skills and values they need to become healthy and physically active for a lifetime. This course addresses both the health and skill related components of fitness which are critical for students' success.

The main goal of this course is to also develop the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting in both competitive and non-competitive activity settings. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a healthy and physically active lifestyle.

Art (Elective)

This course offers students an introduction to Visual Arts. Students will explore the creative process through studio projects (drawing, painting, composition, sculpture, fiber, graffiti, decoupage, collage, written work, art appreciation and art history). The elements and principles of art will be emphasized as they apply to each artist's style. Some art projects will be self-directed, fueled by the students' own interests with research in art history, cultures, modern and contemporary art.

Course objectives: The students will identify and create artwork based on the elements of art and principles of design, demonstrate through their artwork how to use the elements of art to show movement and express feelings, recognize, compare and use different media to create their artwork, develop a respect and appreciation for the artwork of artists, including classmates' art, recognize and compare differences in several art mediums, create representational and abstract art, learn to create depth in 2-dimensional artwork using one point perspective, communicate thoughts, feelings and experiences to others through art, develop creative problem solving and higher-level thinking skills, learn about modern and contemporary art, develop critical thinking and imagination, understand terms that are basic to art media, procedures and techniques, as well as appreciation, maintain a sketchbook for a variety of drawings assignments to perfect their hand-eye ability and drawing skills.

Course topics: Fundamentals of Drawing and Composition, Elements of Art, Principles of Design, Art History and Art Criticism, Drawing, Color theory, Sculpture, Painting, Fibers, Graffiti, Decoupage, Collage.

Resource: *"The Visual Arts: A History"*, by Hugh Honour and John Fleming; *"The Art Teacher's Survival Guide for Elementary and Middle School"*, by Helen D. Hume; *"Children and their Art"*, by Michael Day and Al Hurwitz.

