

# **Bolton Central School Course of Study**

## **PRIMARY GRADES PK-2**

### **PRE-KINDERGARTEN**

The Pre-Kindergarten program at Bolton Central School offers young children a safe environment with many learning opportunities. These four-year-old children discover their human experience by experiencing all aspects of literacy and socialization with their peers. Emphasis on student self-esteem and social skills combine with preparatory academic skills to offer students an outstanding foundation on which to build a successful path toward K-12 graduation.

In this child-centered program, the children grow in a developmentally appropriate classroom that reflects the interests, needs, skills, and natural learning styles of these young students. This creative environment strives to meet the needs of the child as a whole. Our purpose is to provide each child with learning opportunities for social, emotional, physical, and academic development.

Our Pre-Kindergarten classroom is a place where each child is immersed in literacy and interacts with peers during structured and unstructured activities as well as whole group instruction. Peer involvement is very important to a child's social, emotional, physical, and academic development. This program utilizes the New York State Pre-Kindergarten Foundation for the Common Core and offers children a variety of experiences that foster literacy and math development.

Separate transportation is provided to and from school and lunch is provided during the school day.

### **KINDERGARTEN – GRADE 2**

The Primary K-2 curriculum provides experiences that meet children's needs and stimulates learning in all developmental areas. These areas encompass physical, social, emotional, behavioral, and intellectual growth. Different levels of ability, development, and learning styles are expected and accepted and used to design appropriate activities which develop children's self-esteem and positive feelings toward learning.

Reading and English Language Arts is the core of the K-2 program. At the beginning of the reading and English Language Arts curriculum children spend a great deal of time reading age-level books, writing, speaking, acting out stories, drawing, and dictating. Letters and letter sounds are taught weekly. The emergent aspect of the program focuses on the basic acquisition of decoding skills and the general development of encoding and comprehension.

Through a wide variety of instructional materials, phonemic awareness, spelling patterns, vocabulary, grammar, and decoding, the emergent reader continues to develop. Using authentic literature, children use a variety of strategies designed to help develop comprehension and foster enjoyment of reading. The early stages of reading and language arts continues to build on the basic skills, adding increased vocabulary, reading for more meaning, writing content, and an increased pace. The goal is for students to be fluent readers and writers by the end of Grade 2. A formal literacy program is used in addition to individualized and small group instruction.

K-2 Math is an incremental program. It is skill structured and has proven to be a successful program in the primary level. Aligned with state learning standards, our Math program progresses

from counting and cardinality, operations and algebraic thinking, numbers and operations in base ten, measurement and data, and geometry with an emphasis on Math fact fluency at each grade level.

Social Studies and Science programs coordinate with the Reading and Language Arts programs used.

Students in Grades K-2 are exposed to and instructed in Music, Art, Library, STEAM Lab, Physical Education, Speech and Language Development, Guidance Education, and Computer Technologies. Additionally, Occupational Therapy, Speech Therapy and Counseling, and Physical Therapy are available to those in need.

Students are also exposed to STEAM activities and projects at each grade level.

### **ELEMENTARY GRADES 3-5**

Building on the base acquired in the Primary Grades, the 3-5 curriculum centers around the New York State Common Core Learning Standards. The attention to necessary skills stimulates and continues the learning process by building on prior knowledge and developmental skills. Instruction and activities are designed to help each student succeed.

Using a variety of instructional methods and materials at each grade level, students continue to develop necessary skills in the content areas of ELA, Spelling, Math, Science, and Social Studies. All students are evaluated in ELA and Math annually, using the New York State assessments. In addition, Fourth Graders are assessed in the area of Science.

Students in Grades 3-5 additionally are instructed in the special areas of Music, Art, Library, STEAM Lab, Physical Education, Speech, Guidance, Computers, Band, Chorus, and Foreign Language.

### **ENGLISH LANGUAGE ARTS**

#### **GRADE 6 ELA**

Novels, both fiction and nonfiction, short stories, and poetry are the focus of this state standards based curriculum. Emphasis is placed on reading for a purpose, understanding why an author wrote what he or she did and analyzing the structure of a piece. Students learn literary terms and devices and how they operate within a piece. Emphasis is placed on higher level analysis as students make connections to the world beyond.

#### **GRADE 7 ELA**

Students build upon skills gained in 6<sup>th</sup> Grade. Greater emphasis is placed on knowing and understanding more complex grammar and vocabulary and reading more complex texts. Students practice writing claims and supporting the claims with evidence from their reading. This state standards based course introduces students to more rigorous texts that challenge them to make connections between them and write about it. Texts include novels, both fiction and nonfiction, poetry, short stories, and informational texts.

## **GRADE 8 ELA**

The Grade 8 course in English Language Arts focuses on the transition from Middle School to High School. Groundwork is laid that will give the students needed vocabulary and understanding to further their knowledge of language arts. Genres of literature are studied, including poetry, short stories, drama, novels, and nonfiction. Preparation for the New York State English Language Arts exam is completed consistently throughout the year, focusing upon vocabulary, reading comprehension, writing, and class discussion. Presentations, both oral and written, will progress throughout the year, rounding out the teaching of the English Language Arts curriculum for New York State.

## **GRADE 9 ELA**

Freshmen entering this year of English Language Arts study are capable of much higher understanding than in previous years. Because of this, the ninth grade ELA program represents a major jump in the level of literature covered in class. Epic poetry and Shakespearean drama are both studied as well as a variety of literature from various time periods. Particular attention is given to grammar and the writing process. The students will demonstrate their knowledge and proficiency by producing polished pieces of writing, incorporating all aspects of what they have learned. Essay structure and the logical presentation of information, both in writing and speaking, will also receive a great deal of attention.

## **GRADE 10 ELA**

English 10 is designed to help students master the academic standards set for all New York students. Critical to the course is reading, writing, listening, speaking for information and understanding, literary response and expression, critical analysis and evaluation, and social interaction. To meet those standards, the course places heavy emphasis upon studying grammar as it aids our understanding of our language and its best use; reading from a variety of genres and time periods; writing across several modalities; and speaking in multiple settings and for distinctly different purposes. The overall goal of the course is to mold students into more effective communicators, regardless of the specific mode of expression.

## **GRADE 11 ELA**

English 11 builds upon the academic standards set forth for English 10 and is designed to help students become even more sophisticated readers, writers, listeners, and speakers. Within the course is a heightened focus upon English proficiency. The course culminates in the English Language Arts Regent Examination, which assesses mastery of content from previous grades.

## **GRADE 12 ELA**

The Grade 12 year of English Language Arts focuses upon preparing the students for the various challenges of college and later life. The students are required to submit research papers with full documentation. Students learn to research effectively, budget their time, and cite references properly, avoiding the pitfalls of plagiarism. College style essays will then be discussed and each student will submit one from the Common Application. These essays can later be submitted with completed college or university applications if they so desire. The history of our language is studied from its origins to present day, and students will read literature from these various periods. Written and oral expression will be extensively used throughout the year, discussing themes and concepts relevant to our modern world.

## **ENGLISH COMPOSITION 101/ENGLISH COMPOSITION 108-WRITING ABOUT LITERATURE**

Offered as a college credit-bearing course through SUNY Adirondack, this first semester course focuses on instruction upon and practice in the fundamental process of personal writing, including the writing modes narrative, descriptive, cause and effect, comparison and contrast, process analysis, and

so forth. Critical to the workshop based course are, revision, careful analysis, and evaluation of each other's writing. The second semester hones students' ability to write effectively about classic works of literature. A research paper is due for each course.

## **AP LANGUAGE AND COMPOSITION**

An AP English Language and Composition course cultivates the reading and writing skills that students need for college success and for intellectually responsible civic engagement. The course guides students in becoming curious, critical, and responsive readers of diverse texts, and becoming flexible, reflective writers of texts addressed to diverse audiences for diverse purposes. The reading and writing students do in the course should deepen and expand their understanding of how written language functions *rhetorically*: to communicate writers' intentions and elicit readers' responses in particular situations. The course cultivates the rhetorical understanding and use of written language by directing students' attention to writer/reader interactions in their reading and writing of various formal and informal genres (e.g. memos, letters, advertisements, political satires, personal narratives, scientific arguments, cultural critiques, research reports.)

Reading and writing activities in the course also deepen students' knowledge and control of formal conventions of written language (e.g. vocabulary, diction, syntax, spelling, punctuation, paragraphing, genre.) The course helps students understand that formal conventions of the English language in its many written and spoken dialects are historically, culturally, and socially produced; that the use of these conventions may intentionally or unintentionally contribute to the effectiveness or ineffectiveness of a piece of writing in a particular rhetorical context; and that a particular set of language conventions defines Standard Written English, the preferred dialect for academic discourse.

Rhetoric and composition courses emphasize the reading and writing of analytic and argumentative texts instead of, or in combination with, texts representing English-language literary traditions. Like the college rhetoric and composition course, the AP English Language and Composition course focuses students' attention on the functions of written language in and out of the academy, asking students to practice the reading as well as the writing of texts designed to inquire, to explain, to criticize, and to persuade in a variety of rhetorical situations. In this approach to the study and practice of written language, a writer's style is important because of its rhetorical, rather than its aesthetic, function.

Students in this course take both the AP exam, as well as the NYS Regents exam in English Language Arts.

## **MATH**

### **MATH 6**

In this course, students will strengthen their knowledge of mathematics operations, algebra, and geometry. The main focus of the year will be on ratios, rates, proportional reasoning, operations with fractions, and writing and solving equations to represent real-world situations. Students will be introduced to integers, learn how to use tools and diagrams to solve problems, interpret and organize data, evaluate and manipulate expressions, and measure 2- and 3- dimensional objects.

### **MATH 7**

In 7<sup>th</sup> Grade, students see a continued and increased emphasis on ratios, rates, and proportional relationships. The concepts will extend to include percent applications. Students will also use the

properties of rational numbers to perform operations, manipulate linear expressions, and solve equations and inequalities. Using data measures and distributions to compare populations, exploring probability, and geometry in 2- and 3- dimensions are also included topic areas.

### **PRE-ALGEBRA 7**

This is an accelerated 7<sup>th</sup> Grade mathematics course that includes all the topics from Math 7 as well as selected topics from Pre-Algebra 8. These additional topics include solving multi-step equations with rational numbers; calculating surface area and volume of cones, cylinders, and spheres; working with exponents, scientific notation, and linear functions. Upon successful completion of this course, students will take Algebra.

### **PRE-ALGEBRA 8**

This is an 8<sup>th</sup> Grade mathematics class. Students will continue exploring sets of numbers, including operations with rational and irrational numbers and solving multi-step equations containing rational numbers. A large amount of time is dedicated to exploring all aspects of linear functions including writing, graphing, and solving systems. Students also learn about congruency and similarity transformations, the Pythagorean Theorem, and finding surface area and volume of cylinders, cones, and spheres.

### **ALGEBRA**

The Algebra 1 curriculum is built on a foundation of interpreting linear, exponential, quadratic, and absolute value functions and using these functions to model situations. Students will also solve and graph linear and absolute value inequalities, classify and apply the properties of real numbers, and perform operations on and factor polynomials. Analyzing the center and variability of data sets and using conclusions to make predictions are also included topics. This course is offered as a one year or three semester course. This course culminates with a New York State Regents Exam.

### **GEOMETRY**

Geometry emphasizes reasoning skills to make conclusions regarding measurements in 2-dimensional figures. Students will use the properties of parallel lines, triangles, quadrilaterals, other polygons, and circles to prove statements regarding figures. Congruence and similarity will be established through proofs and through transformational geometry in the coordinate plane. This course also introduces students to the use of trigonometry to calculate measures in triangles. This course is offered as a one year or three semester course. This course culminates with a New York State Regents Exam.

### **ALGEBRA II**

This is a 10<sup>th</sup> through 12<sup>th</sup> Grade course following the NYS Learning Standards and will conclude with the New York State Regents Exam in Algebra II. The course is an expanded study of functions that builds upon those introduced in Algebra. Students will study polynomial, rational, exponential, logarithm, radical, and trigonometric functions, and will learn to draw inferences and conclusions from data (probability and statistics). Students will be expected to use mathematical functions to model real-world scenarios, construct viable arguments, and recognize and utilize patterns in order to solve problems.

### **INTRODUCTION TO STATISTICS**

This is a 12<sup>th</sup> Grade mathematics course designed to prepare students for a college-level Statistics class. Students will explore methods of displaying and comparing both categorical data and quantitative data. The class will work with standard deviation and normal models and explore relationships between variables including association, correlation, and linear regressions. Then

students will learn about observational studies, sampling techniques, and experimental design and will work with basic probability rules and models. Other topics for the course include the central limit theorem, confidence intervals, and hypothesis testing.

### **PRE-CALCULUS**

This is an 11<sup>th</sup> and 12<sup>th</sup> Grade course designed to bridge the substantial gap that exists between Algebra II and college-level Calculus. Algebraic topics will build upon those introduced in Algebra II, and the concepts of trigonometry will be more fully developed. The emphasis will be on mathematical modeling, problem solving, and mathematical fluency. The course concludes with an introduction to Calculus: limits will be studied; derivatives and integrals will be introduced.

### **CALCULUS**

This is a 12<sup>th</sup> Grade course to prepare students for the mathematical rigor of college coursework in majors such as math, physics, computer science, or engineering. Students will study limits, derivatives, applications of derivatives, integrals and their applications, and differential equations. Additional topics may be selected based on enrollment.

### **AP CALCULUS**

Following a similar curriculum as the regular Calculus class, this course offers increased rigor and the opportunity for students to take the AP exam in Calculus that could result in possible college credit.

## **SCIENCE**

### **LIFE SCIENCE**

Life Science is a 7<sup>th</sup> Grade course designed to have students learn about the living world, its inhabitants, and their relationships. The dependence of life forms on their internal and external environments is stressed. The course is designed to have students actively perform laboratory exercises that get students involved in the actual practice of science rather than the accumulation of knowledge. This course addresses a biological curriculum through an emphasis on the local environment and current environmental issues through the New York State Learning Standards. Middle School students are guided to become more independent learners through instruction in study skills, group work, and personal responsibility for meeting course requirements with the assistance of the teacher in areas of student need.

### **PHYSICAL SCIENCE**

Physical Science is an Eighth Grade course designed to have students actively explore the relationships between the materials and forces of the universe. Practical application of natural phenomenon and their relevance to the student's everyday world is stressed. The course is designed to have students actively perform laboratory exercises that get students involved in the actual practice of science rather than the sole accumulation of knowledge. The course addresses a physical science curriculum through an emphasis of the local environment and current environmental issues in conjunction with the New York State Learning Standards. These goals are through instruction in study skills, group work, and personal responsibility for meeting course requirements with the assistance of the teacher in areas of student difficulty.

## **PHYSICAL SETTING-EARTH SCIENCE**

Earth Science is a Regents level laboratory course designed to introduce students to the many facets of earth science through group instruction, laboratory work, and the tremendous variety of resources available through the internet. Practical application of natural phenomenon and their relevance to the student's everyday world are stressed. The course addresses the New York State Earth Science curriculum through an emphasis on the local environment and current environmental issues and the New York State Standards. The development of personally appropriate study skills and time management is encouraged in each student. This course concludes with the administration of the New York State Regent Exam.

## **LIVING ENVIRONMENT-BIOLOGY**

This program of studies is outlined in the New York State Regents Core Guide for Living Environment. Major topics include: scientific attitudes and methods of experimental techniques, living and non-living things, the organization of living things, animal and plant physiology, reproduction, genetics, the chemistry of living things, comparative anatomy, and ecological relationships. Students will learn to draw conclusions from inquiry-based laboratory experience. It should be noted that students must successfully complete a minimum of 1200 minutes of laboratory activities, with satisfactory reports submitted, in order to meet the requirement for the Regents Examination. At the conclusion of the course, the students will be required to take the New York State Regents Examination in Biology.

## **PHYSICAL SETTING-CHEMISTRY**

Regents Chemistry is a student-centered, problem-solving approach to the discipline of Chemistry. It is the goal to encourage science process skills that will provide students with background and curiosity to investigate important issues in the chemical world around them. Topics covered include atomic structure, the periodic table, stoichiometry, bonding, solutions, kinetics, equilibrium, acids and bases, nuclear chemistry, organic compounds, and electrochemistry. Students will develop skills in observation, measurement, analysis and calculation, manipulation and application of variables enabling them to problem solve in both the theoretical, physical, and practical setting. Included with the theoretical aspects is a minimum of 1200 minutes of laboratory work. Students will become familiar with chemical techniques and laboratory safety, leading to the administration of the Regents Exam at course conclusion.

## **PHYSICAL SETTING-PHYSICS**

Physics is the study of the physical world from the laws governing the celestial bodies to those that govern the intricate workings of the atoms. There is extensive work interpreting readings, equations, and graphs. Emphasis is placed on problem solving, critical thinking, effective communication, and criticism. Students are expected to use algebraic expressions as well as verbal arguments to explain concepts. This course has a laboratory requirement. Prerequisites: Strong algebra skills and a basic knowledge of trigonometry. This course concludes with the administration of the New York State Regents Exam.

## **ENVIRONMENTAL SCIENCE**

Environmental Science is a course that focuses on local and national environmental issues and their importance on the individual student. The goal of the course is active learning. Basic principles of science introduced in earlier years are reinforced and extended through personal and group projects that students select and refine during the course of the year. The course encourages the students to utilize the full range of technology and local resources at Bolton Central School and the community at large.

## **ADVANCED SCIENCE RESEARCH**

The research course is a three-year elective in which students choose a topic and carry out an original research project on that topic. The student does all of what professional researchers do, from journal readings to finding a mentor, planning a project, and carrying it out to an appropriate research conclusion. As the work progresses, the student writes research papers, creates posters, and presents research findings at available competitions and symposia as determined by the instructor. During the student's junior and senior years, he or she may elect to take the course for college credit for a total of up to twelve credits at the State University of New York. Every two weeks the research instructor meets one on one with student researchers to discuss the progress of the student's research. This meeting serves as the main assessment tool for student progress. All students are welcome to apply regardless of past academic history. However, due to the independent nature of this course, successful candidates must be self-motivated independent workers who are able to remain focused and productive without constant close supervision.

## **PLANET EARTH**

Planet Earth is an introduction to physical geology, including classification of minerals and rocks and a study of the geologic forces of water, wind, earthquakes, and glaciers. Topics include geologic time, fossils, the evolution of the ocean, plate tectonics, erosion, sources of energy and mineral resources, and astronomy.

## **SOCIAL STUDIES**

### **6TH GRADE SOCIAL STUDIES: HISTORY & GEOGRAPHY OF THE EASTERN HEMISPHERE**

Grade 6 Social Studies is based on the geography and history of the Eastern Hemisphere, including the development of cultures, civilizations, and empires; interaction between societies; and the comparison of trends in government and economics. It also incorporates some elements of other social sciences. The course begins with an examination of the Eastern Hemisphere today using geographic skills. This provides the foundation to make connections between the past and the present throughout the course. The remainder of the course is divided into seven Key Ideas that cover a time span from pre-history into the 1300s. Students are provided the opportunity to explore belief systems across time and to examine the foundation of democracy. It is the goal of this course to emphasize New York State's Social Studies standards and New York State's Learning Standards in order to help each student build a solid foundation in Social Studies.

### **7TH GRADE SOCIAL STUDIES: HISTORY OF UNITED STATES & NEW YORK I**

Grade 7 Social Studies is arranged chronologically and incorporates geography as well as economic, social, and political trends. The course content is divided into eight Key Ideas, tracing the human experience in the United States from pre-Columbian times until the 1850s, with a focus on the people, events, and places in New York State as applicable. Throughout the course students will develop the necessary skills required to see connections across time. For example, when examining indentured servitude and slavery, there is a discussion and examination of human trafficking, experiences of immigrants and informed action that citizens might take. Students will explore all topics covered in this class by analyzing and evaluating primary and secondary sources, as well as engaging in many other activities and writing assignments and projects. It is the goal of this course to emphasize New York State's Social Studies standards and New York State's Learning Standards in order to help each student build a solid foundation in Social Studies.



## **8<sup>TH</sup> GRADE SOCIAL STUDIES: HISTORY OF UNITED STATES & NEW YORK II**

Grade 8 Social Studies is arranged chronologically beginning with the Civil War and ending at the present and incorporates geography as well as economic, social, and political trends. The course content is divided into nine Key Ideas; the first seven trace the human experience in the United States from the causes of the Civil War to the end of World War II. The last three Key Ideas examine different themes in the United States and New York history from the post-War period up to the present day, providing the opportunity to explore contemporary issues. Students will explore all topics covered in this class by analyzing and evaluating primary and secondary sources, as well as engaging in many other activities, writing assignments, and projects. It is the goal of this course to emphasize New York State's Social Studies standards and New York State's Learning Standards in order to help each student build a solid foundation in Social Studies.

## **UNITED STATES HISTORY SINCE 1945**

The course looks at U.S. History from 1945 through the present from a social and political perspective. Students study and evaluate social and political changes and developments in American society. Using big topics as units of study and essential questions, the course effectively provides students with detailed information that standard, non-elective courses cannot. Students are encouraged to look at issues from a variety of perspectives to gain a complete understanding of our history and future.

## **GLOBAL HISTORY 9**

This course is the first year of a two-year Global History Curriculum. It begins by discussing current human rights issues throughout the world and continues with the study of the first civilizations, tracing the development of the ideals of human rights. The curriculum continues through the classic civilizations of Greece and Rome, Medieval Europe, the Renaissance and Reformation, Age of Discovery, Colonization and Colonial Independence. Current international events will be discussed throughout the year.

## **GLOBAL HISTORY 10**

This course is the second year of a two-year Global History Curriculum. The focus of this course is on Revolutions (French, Russian, Chinese, Industrial), World Wars I and II, and the fall of Communism. Current international events will be discussed throughout the year. There is a Global History Regent sExam at the end of 10<sup>th</sup> Grade.

## **U.S. HISTORY AND GOVERNMENT**

This Grade 11 course is designed to give students the knowledge of our country's history and government that they will need to be active participants in our democracy. After studying the causes of the American Revolution, the study of the Constitution and our federal system of government ensues. The remainder of the course looks at historical challenges to our Constitution, such as the Civil War, the Great Depression, and World War II, focusing on efforts to improve our system of government, such as the Women's Rights Movement, the Progressive Era, the New Deal, and the Civil Rights Movement. Current events will be discussed throughout the year. A Regents Exam is administered at the end of the course.

## **AP U.S. HISTORY**

The course focuses on developing students' understanding of American history from approximately 1491 to the present. The course has students investigate the content of U.S. history for significant events, individuals, developments, and processes in nine historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation)

employed by historians when they study the past. The course also provides seven themes (American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society) that students explore throughout the course in order to make connections among historical developments in different times and places. Students in this course will take both the AP exam, as well as the NYS Regents exam in U.S. History.

### **AP PSYCHOLOGY**

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. Students enrolled in this course will take the AP exam for possible college credit.

### **LAS 110 (LATIN AMERICAN STUDIES): INTRODUCTION TO LATIN AMERICAN AFFAIRS**

LAS 110 is a one semester, Grade 12, elective course granting New York State Social Studies credit as well as SUNY credit at the university level. \* Intended for the above average Social Studies student, LAS is an in depth study of a designated country in addition to a holistic look at other members in the Western Hemisphere. Students will engage in the study of topics including human and drug trafficking, urban issues, child labor, prostitution, counter terrorism, poverty, pollution, deforestation, malnutrition, and the impact of colonialism. This course is scheduled so that Economics can be completed in the opposite semester. \*LAS 110 is taken in place of Participation in Government and is a New York State graduation requirement.

### **PARTICIPATION IN GOVERNMENT**

Participation in Government is a half-year course required of Grade 12 students for graduation in New York State high schools. Participation in Government stresses student awareness and involvement in government and the governmental process. Through involvement in local government, students become aware of the important role that each citizen plays in their community as well as on the state and national level. In addition to active involvement, students are involved in in-depth study of the Constitution and Bill of Rights as they relate to the interaction between citizen and government.

### **ECONOMICS OR ECON101: PRINCIPLES OF ECONOMICS**

Economics or ECON101 are half-year courses for Grade 12 students. Economics is also a New York State required course for graduation. Economics is a survey course that looks at a broad range of economic topics both at home and abroad. The course challenges students to relate academic material to real world situations that they will encounter entering the post-secondary world. As part of the course, students look at advertising, decision-making, and economic goal setting as they relate to each individual. This course is taught in a two-section format, with one section awarding high school credit. Successful completion of the other section leads to SUNY University credit. The ECON101 focuses primarily on Macroeconomics, the interaction of the economy as a whole.

### **ADIRONDACK HISTORY**

Adirondack History is a full-year elective course offered to Juniors and Seniors. The course combines primary and secondary readings, lectures, and field studies to enlighten students about the unique and dynamic region they live in. In the first half of the course, students survey Adirondack history from the French and Indian War to the present. Logging, mining, recreational development, and the romantic era are all covered. Students in the second half of the year focus on economics and development in the region. Issues of land use and development, preservation, and the conflicting

desires between park residents are all topics that are presented to focus the students on this important and ever-changing issue in the Adirondack Park.

### **CONFLICTS IN U.S. HISTORY**

Conflicts in U.S. History is offered to Juniors and Seniors as a Social Studies elective. The course looks at American History from the perspective of its involvement in war. Students look in-depth at the nature of conflict itself as well as the Korean War, War in Vietnam, invasions of Grenada and Panama, interventions in Bosnia and Somalia, the Persian Gulf War, and the invasions of Afghanistan and Iraq, and conflicts in the gulf region. The course allows for a level of detail that a regular high school history course cannot dedicate the time. Issues of technological development, strategy, and U.S. foreign policy are all incorporated into the discussion of each war. Students leave the course with an appreciation for Americans' sacrifice and the important role America has had as a world leader.

### **THE CIVIL WAR**

The Civil War was the most traumatic period of American history: brother against brother, father against son, and families torn apart represent how divisive the war was to the nation. Students will learn about the individual battles, tactics, technology, politics, men and women involved in this monumental struggle. The course will give the students a deeper understanding of what a New Birth of Freedom really cost.

### **CIVIL RIGHTS**

The civil rights movement is one of the most significant sources of social change in the United States during the 20th Century. This course traces the civil rights movement from the 1950's through the 1960's, and focuses on the people who used nonviolent methods to bring about great change.

### **THE HOLOCAUST**

The Holocaust is a period of human history that demonstrates the worst of human behavior and the evil that mankind can bring on itself. The course is more than just a recounting of the horrors of the Holocaust. It is an attempt to explain the forces that gave rise to it, the motives of those who conceived it, and the culture that was destroyed by it.

### **SENIOR SEMINAR 12**

Senior Seminar is a full-year course offered to all Seniors. Senior Seminar addresses a wide variety of issues that students face in the post-secondary world. Issues of credit and finance, decision-making, college admissions and residence life, interviewing and ethical development are all topics which students are confronted with. The emphasis is placed on practical, useful, and accurate information that students will be able to use in the very near future.

## **ART EDUCATION**

### **ART 1-4**

In Art 1-4, students will be learning foundation skills. Skill enhancement and aesthetic appreciation is a priority.

### **ART 5 AND 6**

In Grade 5 and 6 Art, students in each grade will explore the elements and principles of design. Students work with multiple mediums while creating two dimensional and three dimensional artworks. All art lessons have been developed to meet New York State Learning Standards for the Arts.

## **ART 8**

In Eighth Grade Art, students will be taken through guided practices while learning and practicing the principles and elements of design. Students create two dimensional and three dimensional artworks while using multiple mediums. Students learn skills that will enable them to respond critically to their artwork and the artwork of others. All art lessons have been developed to meet the New York State Learning Standards for the Arts.

## **STUDIO IN ART**

In this required Grade 9 class, students explore art as a vital form of visual communication that transmits the ideas and values of individuals as well as diverse cultures. Students develop skills that enable them to respond critically and respectfully to their own artwork as well as the artwork produced by others. Students develop an appreciation and understanding for a variety of artists and works of art. Students are taken through guided practices while practicing the elements and principles of design. Students create two dimensional and three dimensional pieces. All art lessons have been developed to meet the New York State Learning Standards for the Arts.

## **DRAWING AND PAINTING**

In this elective class, students learn the foundation techniques of drawing and painting using various mediums. Students create two dimensional pieces of art using the principles and elements of design and explore drawing and painting as a vital form of visual communication and visual expression. Students develop skills that enable them to respond critically to their own artwork and the artwork of others. This class begins the portfolio process that students will need for college entrance into the arts. Drawing and Painting is a pre-requisite course for all advanced art classes. All art lessons have been developed to meet the New York State Learning Standard for the Arts.

## **ADVANCED STUDIO ART**

In this class, students learn advanced methods and techniques in multiple areas of the fine arts. Students create two dimensional and three dimensional pieces while identifying the principles and elements of the design. Students start to focus on preferred mediums and build ideas for individualized artworks. Advanced Studio Art is an important step to the portfolio building process as it helps students create a well rounded portfolio that is needed for college entrance into the arts. All art lessons have been developed to meet the New York State Learning Standards for the Arts.

## **PHOTOGRAPHY**

Photography, considered to be a Graphics Art related Studio course, builds on skills developed in Grade 9 Studio Art with a strong emphasis on photography and graphic composure and design. Students learn basic techniques of camera operation, film processing and darkroom procedures. The class explores problems in picture composition, and the historical aspects of media are discussed. These principles are also discussed as they relate to the digital medium. Students learn to understand and apply the aesthetic principles of composition and design to the art of photography. They develop skills that enable them to respond critically and respectfully to their own photos as well as the photographs produced by others. All photography lessons have been developed to meet the New York State Learning Standard for the Arts.

## **CREATIVE CRAFTS**

In this class, students will be exploring the world of hands on craft and folk art. Students will be working with multiple mediums outside the world of traditional visual fine arts. Students will develop skills that will enable them to respond critically to their own pieces as well as the pieces produced by their peers. Students will develop an appreciation and understanding for a variety of artists and ways

to create different types of folk art and traditional craft. In this class, students will be developing techniques that will help with design and creation of a variety of pieces as well as create designs and techniques of their own. This course has been developed to meet the New York Learning Standards for the Arts.

### **AP STUDIO ART**

In this class, students learn advanced methods and techniques in multiple areas of the fine arts. Students create two-dimensional and three-dimensional pieces, while identifying the principles and elements of the design. Students start to focus on preferred mediums and build ideas for individualized artworks.

Advanced Studio Art is an important step to the portfolio building process, as it helps students create a well-rounded portfolio that is needed for college entrance into the arts. All art lessons have been developed to meet the New York State Learning Standard for the Arts.

## **COMPUTER/BUSINESS**

### **INTRODUCTION TO OCCUPATIONS**

In this required course, Grade 9 students are taken through the career exploration process beginning with an ability profile to determine strengths, weaknesses, and interests. Topics covered include resumes, job interviews, banking, insurance, and retirement planning.

### **WEB STUDIES**

In this project based course, students will be introduced to the design, creation, and maintenance of web pages and websites. The course progresses from basic HTML programming to WYSIWYG web editors. Students will learn to manipulate photos by designing a thumbnail photo gallery, use audio and still images to create an enhanced podcast, produce a demonstration video using a helmet camera, and generate a newscast using green screen technology. Software applications that students are exposed to are iMovie, Garage Band, Keynote, Adobe Photoshop, Adobe Dreamweaver, Adobe Flash, Quick Time, Microsoft Word, and Microsoft Power Point.

### **E-COMMERCE**

In this project based course, students will learn to design a business logo, plan out a business website, develop a digital web based photo catalog, create a radio commercial and generate a television commercial. Software applications that students are exposed to are iMovie, Garage Band, Keynote, Adobe Photoshop, Adobe Dreamweaver, Adobe Flash, Quick Time, Microsoft Word, Microsoft Power Point, and Microsoft Excel.

### **APPLIED COMMUNICATIONS**

In this project based course, students will be introduced to the design, creation, and production of multimedia projects. Students will learn to manipulate digital video cameras by creating a Rube Goldberg contraption, master the scanner and digital audio recorder to create a children's picture book, put together a music video, use green screen technology to create a digital Bucket List, and finally direct and produce the Sports Banquet and Graduation videos. Software applications that students are exposed to are iMovie, Garage Band, Keynote, Adobe Photoshop, Adobe Dreamweaver, Adobe Flash, Quick Time, Microsoft Word, and Microsoft Power Point.

## **ECO 101 PERSONAL FINANCE**

In this college credit course, students will be exposed to the subject areas needed to manage their economic future. Topics include the Financial Planning, Banking, Consumer Credit, Retirement Planning and Investing, Health Insurance, and Risk Management.

## **BUSINESS COMMUNICATIONS (BUS141)**

A course in the theory and applications of a variety of communication forms used in business. Letters, memos, reports, resumes, meetings, press releases, and other topics are considered. 3 College Credits.

## **PRINCIPLES OF MANAGEMENT (BUS101)**

This course develops both the content and process issues of management. Defines the functional activities of planning, organizing, staffing, directing and controlling, while stressing the areas of communications, decision-making, group dynamics, conflict resolution, motivation, leadership and individual self-improvement. The art of delegation is explored in the issues of authority, accountability, and responsibility. 3 College Credits.

## **WORLD LANGUAGES**

### **6/7 INTRODUCTORY FRENCH/SPANISH**

This course introduces students at the Grade 6 level to a basic understanding of the French/Spanish language. They learn useful expressions that are necessary for everyday conversation. Students become familiar with basic vocabulary for a variety of topics such as school, family, home, community, animals, sports, transportation, travel, and more. Grammar is taught in conjunction with these topics as needed for personal expression. The students become familiar with Francophone and Spanish speaking countries through a series of projects that take place throughout the school year. This class meets two days per week in 6<sup>th</sup> grade, and 2-3 days per week in 7<sup>th</sup> grade with exposure to both languages. Students choose one language for 8<sup>th</sup> Grade.

### **FRENCH 8**

Taught in Grade 8, the objective of this beginning level course closely follows the New York State Learning Standards for learning a second language. From the first day of class, students are speaking, listening, reading, and writing in the French language. All lessons and communication takes place in French in a friendly and encouraging environment. English is used only for clarification. Students learn the fundamentals of French grammar: how to converse in the spoken and written form using the present and past tenses; how to discuss their preferences; persuade others and solicit information; how to describe their world and the people in it. The curriculum includes a comparison of French culture with American culture, with the focus being on understanding the cultural differences. In addition, the students study French geography. Students learn test-taking strategies specifically developed for passing a foreign language test as developed by the instructor.

### **FRENCH 9**

This Grade 9 offering is the second course for students taking the French Language sequence. This course is also conducted in the target language with as little reference made to English as possible. Following the New York State Standards, this course challenges the students' ability to speak, listen, read, and write in the target language. At this level, students will learn all of the verb tenses necessary for everyday conversation. Grammar lessons will reinforce and augment the foundations established at the first level. The basic cultural understanding and the knowledge gained

in French 1 is also enriched and increased. A unique feature of this course is the eight-week survey of French History, which extends from pre-Roman times to the 21<sup>st</sup> century.

## **FRENCH 10**

At Grade 10, this course is designed only for students with two successfully completed years of French. All lessons are conducted in the target language. Grammar lessons are treated as a review with the real focus being on using that knowledge in real life scenarios. For example, renting an apartment in France or writing a resume in French is covered. Throughout the year, the students are presented with activities that challenge their oral, aural, writing, and reading skills. Moreover, they learn test-taking strategies specifically designed for passing the locally developed foreign language test exclusively in the French language.

## **FRENCH 201/202**

This 6 credit, year long course is intended as a comprehensive review of the principles of French grammar as well as an enrichment of vocabulary and an exploration of the history that has shaped the identity and culture of the Francophone world. In addition, it is an introduction to literary classics, modern writers and modern films. Emphasis is on nurturing communicative expression through class discussions, student based presentations and group work. Authentic language skills are learned through memorization of new concepts and constant practice in situations resembling those found in real-life. As a result, it is imperative that vocabulary be practiced on a daily basis, and grammatical concepts be reviewed repeatedly in order to use them in class with one another, as well as through the use of other mediums including television, newspaper articles, music, etc. You will find that, with much practice, language will become increasingly easier. In today's world, the knowledge of a second (or even third!) language has become more important than ever. Not only does the knowledge of another language benefit your first language skills, but it also broadens your career opportunities, facilitates travel, and gives you a better understanding of international news.

## **CROSS CULTURAL AWARENESS**

### **\* CULTURE AND CULTURES AROUND THE WORLD**

The objective of this course is Cross Cultural awareness and it is designed for students interested in expanding their study of French. As countries become less isolated and humanity finds itself in a global neighborhood, it is increasingly important to become aware of our ethnocentricity. In the first unit of the course, we study the cultural conditioning within many different societies, focusing mainly on France and the United States, in an effort to develop understanding. Our studies include not only the deep culture but also the formal culture of France. Students use their language skills in a variety of ways. During the Survey of French Literature unit, students analyze carefully chosen excerpts in the target language. The French cuisine unit requires the students to translate French recipes and then to prepare traditional French foods. The course ends with the Visual Arts unit that includes a survey of French fine art in addition to French filmmaking.

## **SPANISH 7<sup>TH</sup> GRADE**

This course introduces students at the Grade 7 level to a basic understanding of the Spanish language. They learn useful expressions that are necessary for everyday conversation. Students become familiar with basic vocabulary for a variety of topics such as school, family, home, community, animals, sports, transportation, travel and more. Grammar is taught in conjunction with these topics as it is needed for personal expression. The students become familiar with Spanish speaking countries through a series of projects that take place throughout the year.

## **SPANISH 8<sup>TH</sup> GRADE**

Eighth Grade Spanish is a beginning step to becoming proficient using the Spanish language. This course focuses on developing vocabulary and conversation skills with an emphasis on spoken communication and grammatical knowledge. Hispanic history and cultural information are covered through class discussions, readings, and student research projects. At the end of the year, students must take an instructor developed Proficiency Exam.

## **SPANISH 9<sup>TH</sup> GRADE**

This Grade 9 course emphasizes the continuing development of vocabulary and conversation skills with an increased emphasis on grammatical structure and accuracy. Students are expected to use Spanish as the principal means of communication during class. Students will begin to read authentic works in Spanish and discuss literacy concepts in class conversation. History and culture are explored through reading, presentations, and student research projects presented in the target language.

## **SPANISH 10<sup>TH</sup> GRADE**

This Grade 10 course emphasizes developing confidence in speaking through intensive conversation practice. Students will use Spanish as the principle means of communication during class. In addition to oral conversations, dialogues and presentations, students are required to write essays in Spanish and present research on a variety of cultural topics. A stronger emphasis is placed on reading comprehension ability. Students will read a variety of authentic selections in Spanish and learn to derive meaning through inference and discussions. At the end of the course, students must take an instructor developed comprehensive exam, which is completely in Spanish.

## **SPANISH 201/202**

This course is available for those students who wish to continue advanced Spanish studies in college and is designed for college-bound students only. It is recommended in particular for students interested in an international profession such as international business. The course is taught completely in the target language and its main focus is advanced grammar and culture. The curriculum has been approved by the Foreign Language Department so SUNY college credit can be obtained. As well, students will be able to test out of the beginning levels of instruction at the university level in anticipation of advanced university instruction.

## **LIBRARY MEDIA AND INFORMATION SKILLS**

### **ELEMENTARY LIBRARY**

Elementary students have a once a week scheduled library class where they are exposed to a variety of library resources and activities at grade appropriate levels. In addition to this weekly visit, classroom teachers may schedule additional time as needed to meet the information needs of the students. Borrowing of books and other resources is an integral part of every class.

### **GRADE 7 INFORMATION SKILLS**

This class meets once a week for instruction in information literacy skills. The instruction is designed to be collaborative with all curriculum areas in order to support the increasing information needs of students. Included in the instruction are literacy activities, database use, research activities, information problem solving, search strategies, and use and location of library materials. The curriculum is aligned with the Common Core Standards and the New York State Information Fluency Continuum.



## **MUSIC**

### **MUSIC K, 1, 2**

Students prepare and perform a musical stage production. Students learn best at this age by being actively involved so we use a hands-on approach geared toward singing, movement, and play-acting. Music is incorporated with children's literature such as nursery rhymes and picture books. Repertoire is used from various cultures and traditions, both historical and fantasy. We explore and discover basic means by which the voice and instruments can alter pitch, loudness, duration, and timbre and begin the development of the singing voice, simple harmonies, and memorizing songs.

### **MUSIC 3, 4, 5**

The students learn to play Orff instruments such as the xylophone and perform in a concert along with the Elementary Chorus. Students sing songs based on historical events, such as the work songs of farmers, sailors, cowboys, and songs of the Revolutionary War, Civil War, the building of American Railroads, and the Pioneers of the American West. Students will learn to read music in Grades 3 and 4 while learning songs on the recorder. In Grade 5 they will learn the impact of the life and music of the great European composers Bach, Mozart, and Beethoven as well as American composers Stephen Foster, Woody Guthrie, and John Philip Sousa.

### **MUSIC 6**

The history of recorded music: Students will learn about Edison's inventions with an introductory glance at the physical aspects of sound and the impact of recorded music in today's society. The history of rock music: Starting from the post Civil War blues through R&B, Elvis, the Beatles invasion, and ending with the introduction of MTV in the early 1980's, students learn about the impact of Rock music on the culture of their parents, grandparents, and their own lives. Students will learn the different ways music can deliver a message and discover the power these messages have among the American public. Students also identify a different community-based musical occupation, interest, or role and explain the skills, knowledge, and resources necessary to pursue the interest or adopt the role.

### **MUSIC 7**

Seventh Grade music is divided into two units. The first unit teaches every student to play the acoustic guitar. Learning a variety of guitar chords and strumming techniques. The importance of practicing at home is emphasized. The second unit is designed to help dispel the negative stereotypes of opera, explore its similarities to musical theater and Hollywood movies, and develop an appreciation for age-old stories. Students will be given opportunities to act, design sets, and explore the importance of music in telling a story. Costumes, special effects, and other aspects of opera are also explored.

### **ELEMENTARY CHORUS**

Elementary Chorus is required for students in Grades 3, 4, and 5. This is a performing group dedicated to presenting music to the general public in 2 concerts a year. This group presents a free concert in the early Winter and another in the late Spring, open to the general public. Young voices sing in two-part style (high, low).

### **MIDDLE GRADES CHORUS**

Middle Grades Chorus is a music elective for students in Grades 6, 7, and 8. This is a performing group dedicated to presenting music to the general public. Participants will perform 2 or 3 times a year, highlighting the group's abilities in a free concert open to the general public. Students involved

in the Middle Grades Chorus, who often have developing and changing voices, usually sing in a three-part style (soprano, alto, and baritone).

### **SENIOR HIGH CHORUS**

Senior High Chorus is a music elective for students in Grades 9, 10, 11, and 12. This is a performing group dedicated to presenting music to the general public. Participants will perform 2 or 3 times a year, highlighting the group's abilities in a free concert open to the general public. Students will learn and practice vocal technique that will prepare them for the challenging music. The mature voices of the Senior Chorus usually sing in a four-part style (soprano, alto, tenor, and bass).

### **MUSIC IN OUR LIVES**

This course is an elective offered to students in Grades 9 and 10 and is designed to enable students to acquire knowledge and understanding of the place music has in our society. Various types of music (pop, rock, classical, jazz, etc.) will be studied. Units of study include what sound is, what music is, recording techniques, how music has influenced society, and how society has influenced music. There are quizzes, tests, and numerical grades issued. There is no performance requirement in this course. (No prerequisite).

### **MUSIC THEORY I & II (MUS124/125)**

Music Theory is designed for the serious music student who desires advanced music study. This course will eliminate the mysteries of music composition and show students that music is a highly organized form of communication. Theory includes note reading, scale construction, interval study, basic chord structure, ear training, melodic and rhythmic development, extended harmonic structure, and four-part writing. This course is offered in partnership with SUNY Adirondack. Students will earn 2 credit for each course upon successful completion.

### **ELEMENTARY BAND**

Elementary band allows 4<sup>th</sup> and 5<sup>th</sup> Graders to explore an instrument in the woodwind, brass, and percussion families. Students are taught proper posture, breathing, and playing techniques for their chosen instruments. 4<sup>th</sup> Graders are introduced to the instruments during the start of the school year and are provided with weekly lessons demonstrating good practice techniques and sound production. 5<sup>th</sup> Graders also have weekly lessons and work on improving their reading and other musical skills such as articulation, interpretation, and execution of the elementary forms of music. Students start meeting together as a group during the second semester and perform in the annual Spring concert in May.

### **MIDDLE GRADES BAND**

As members of the Middle Grades Band, Grade 6-8 students meet in a full group rehearsal twice a week. Students also participate in small group lessons on their individual instruments on a rotational basis during the week. Middle Grades Band members continue their studies of the essential elements music series, which they began during their elementary experience. Band members perform in several concerts a year, including participation in the Marching Band and several annual concerts.

### **HIGH SCHOOL BAND**

High School Band consists of students enrolled in Grades 9-12. Band members perform in Concert Band, Jazz Band, and Marching Band. High School Band offers students an opportunity to explore challenging music literature both past and present and help build on their experiences from Elementary and Middle Grades Band. Band members are offered lessons on a rotational basis throughout each week and meet as a group twice a week. Performances include a Winter and Spring

concert, Exchange concerts, Marching Band parades, All County concerts, and annual NYSSMA Adjudication festivals.

### **JAZZ BAND**

Jazz music is a diverse genre of American Music study and still prevails as a great national music style. This extra-curricular ensemble uses Jazz as a starting point to experience many facets of music performance. This course includes basic music theory, aural skills, and music of various cultures from famous composers and leading contemporary arrangers/artists. Band members perform in a portion of both the Winter and Spring concerts. Other opportunities for this group to perform will be announced throughout the academic year.

### **ALL COUNTY (WCAMTA) FESTIVALS**

The All County WCAMTA (Washington County Area Music Teachers Association) Festival is a once a year extra music activity that allows our interested music students to participate in an area wide concert encompassing about ten schools. Students who are interested in this are required to attend extra rehearsals to learn the concert material prior to the designated weekend festival. Audition requirement is possible.

### **NYSSMA FESTIVALS**

For those students wanting to further excel in their musical performance skills, Bolton Central School offers the opportunity for our musicians to participate in a one day NYSSMA (New York State School Music Association) festival that adjudicates their musicianship and technical abilities. Each student wanting to participate in this festival will learn an appropriate level solo for their voice/instrument chosen by their director. Positive feedback and individual instruction is given to each student at the conclusion of this one-day festival.

## **PHYSICAL EDUCATION**

### **GRADES PK-5**

Physical Education is a required course that explores the various areas of physical activity, physical fitness, health, and safety. The units offered focus on developing basic movements and movement patterns. Balance, coordination, strength, sportsmanship, fair play, cooperation, dance, and basic rules of play in lead up games are some of the areas included at this level. These choices are designed to encourage physical fitness and wellness for life as well as developing Aerobic and Cardiovascular fitness.

### **MIDDLE GRADES**

Physical Education is a required course that explores the various areas of physical activity, physical fitness, health, and safety. The units offered vary from year to year and grade level. Team sport activities include soccer, basketball, volleyball, and softball. These units are focused on skill development and an understanding of the rules, etiquette, and sportsmanship introduction to some lifetime sports such as badminton and ping pong. Dance and cross-country skiing are also introduced at this level. Other units include Aquatics, Adventure Games, Outdoor Education, and High Ropes to establish a safe and lifelong cooperative team-building environment. These choices are designed to encourage physical fitness and wellness.

### **HIGH SCHOOL GRADES**

Physical Education is a required course that explores the various areas of physical activity, physical fitness, health, and safety. The units offered vary due to grade level. Team sport activities

include basketball, football, soccer, softball, ultimate Frisbee, volleyball, and team handball. Lifetime sport activities include archery, canoeing, golf, dance, tennis, badminton, ping pong, cross-country skiing, and water safety. Other units include Adventure Games, High Ropes, and CPR. Our curriculum is to encourage lifelong physical fitness and wellness. Our goal is to encourage our students to become self-directed adults who value physical activity.

## **HEALTH**

Our Health curriculum has been developed to promote wellness, health, literacy, and positive healthy behaviors in young adults. Students will participate in various types of activities while learning how to evaluate their health. Student experiences will help determine future health related choices. Health education is delivered in Grades 7 and 10 following the New York State Health Standards.

The Health curriculum addresses the following units of study: healthful lifestyles (decision making/goal setting); nutrition and fitness; family life; social health and relationships (including dating, sexual decision making, abstinence education, and contraceptive education); resolving conflicts and preventing violence; mental and emotional health (including managing stress and suicide prevention); human growth and development; diseases and disorders (non-communicable and communicable); substance abuse prevention, safety, and first aid.

## **TECHNOLOGY & ENGINEERING EDUCATION**

### **WORLD OF TECHNOLOGY**

This one credit course is for Grades 9-12 and runs for 40 weeks. The World of Technology is the logical continuation of the Middle School Introduction to Technology course. Each student will be provided with opportunities to become engaged in critical thinking as they develop solutions to real world problems. In a hands-on/minds-on laboratory based setting, students will directly engage in Science, Technology, Engineering, Art, and Math activities (STEAM.) Some of the activities we may perform are: Oh'Balloon, Lego marble sorters, corrugated chair design, flight endurance, crazy for coasters, Solar Powered Boats, Bridge construction and design, CO2 Powered Vehicles and many more. This course has been approved by the State Education Department to meet the third Math requirement for graduation and our Senior Math requirement.

### **CREATIVITY AND INNOVATION**

This half credit course is for Grades 9-12 and runs for 20 weeks. It will explore famous inventors/inventions and styles throughout modern history. After learning historic styles, students will be engaged in the design process which will then be used to MAKE solutions to identified problems. Students will be taught skills in sketching, illustrating, model making, and 3D printing.

### **PRODUCTION SYSTEMS**

This one credit course is for Grades 9-12 and runs for 20 weeks. It is a course designed to provide an orientation to mass production through the research and development of a salable product. Students will organize financial and management functions needed to successfully market a product. Use of tools and machines will also be taught. MAKE with Marketing.

## **ENERGY SYSTEMS**

This half credit course is for Grades 9-12 and runs for 20 weeks. It is a design-oriented course presenting alternative resources and systems as a focus of classroom research activities. Topics will include design development, modeling, prototype construction, and testing of energy systems and theories. Typical study areas investigate applications of energy systems including: solar design of buildings, photovoltaic, wind, hydro, hydroponic, energy conservation and many other alternative energy devices. Some projects will be done collaboratively with elementary students.

## **DRAWING AND DESIGN FOR PRODUCTION (DDP)**

This one credit course is for Grades 9-12 and runs for 40 weeks. It is a course that will involve visual problem solving and technical drawing application. The rationale for this course is to give students the knowledge for understanding design methods and drawing knowledge needed for production planning and design. Students will study and learn the use of conventional drafting techniques and then advance on to implement this knowledge to learn CAD (computer assisted drafting) applications. If time permits, students may create items with additive manufacturing (3D Printing) and Computer Numerical Control (CNC) milling. This course may be used to meet the Art/Music requirement for graduation.

## **TRANSPORTATION SYSTEMS**

This half credit course is for Grades 9-12 and runs for 20 weeks. The development of transportation systems throughout the world has a tremendous impact on the intellectual and economic growth of societies. Transportation systems allow people to move not only themselves but also durable and non-durable goods in an increasingly fast and efficient ways. In this course of study, we will explore the transportation industry of today and explore future innovations. It will incorporate three of our major areas of transportation: land transportation, marine transportation, and aerospace transportation. Students will be rebuilding a small inter-combustion engine during this course. This course will also make students aware of opportunities available to them in this field of study.

## **CONSTRUCTION SYSTEMS**

This one credit course is for Grades 9-12 and runs for 20 weeks. Construction Systems is designed to provide students exposure to most areas of residential construction. Areas to be studied include: site preparation, foundations, framing, roofing, siding, openings, windows, doors, plumbing, wall finishing, and basic electrical. Much emphasis will be placed on the safe use of basic construction tools and machines. Students will build a basic building, lay out stairs and rafters, and perform plumbing and wiring tasks.

## **ADIRONDACK FURNITURE**

This half credit course is for Grades 9-12 and runs for 20 weeks. It will investigate the development and history of rustic furniture in the Adirondacks. Upper classmen taking Adirondack History will gain a more in depth knowledge of logging in the Adirondacks through cross-curricular connections. After exploration, students will experiment with design and fabrication of sample pieces. A strong emphasis will be placed on furniture design, function, layout, and connections. Use of specialized techniques and tools will prepare students for the creation of a capstone project of their selection, which they will be able to keep after the class.

## **DRIVER EDUCATION**

This half unit course is offered to Grades 9-12 and runs for 20 weeks. The driver course is taught for one semester during the regular school year. The class consists of two phases, classroom and behind the wheel. The classroom phase consists of a wide variety of topics about the highway

transportation system (HTS). Topics include good driving practices and driving techniques that will develop an in depth knowledge of the safe operation of a motor vehicle. Students will learn that the HTS is an interactive system of roads, vehicles, and people. Traffic laws are not only designed to create order but to help safeguard people when using roads. Behind the wheel experience helps develop practical skill and positive habits in our local driving environment. There is great emphasis on helping students become responsible citizen drivers.