



JUNIOR HIGH

PROGRAM OF STUDIES

2025-2026

Program of Studies

Lake George Junior High School

2025-2026

| | |
|---|-----------|
| ENGLISH | 3 |
| ENGLISH 7 | 3 |
| ENGLISH 8 | 4 |
| SOCIAL STUDIES | 5 |
| SOCIAL STUDIES 7 | 5 |
| SOCIAL STUDIES 8 | 5 |
| MATHEMATICS | 6 |
| MATHEMATICS 7/7A | 6 |
| MATHEMATICS 7/8X - Accelerated Mathematics for 7th Graders | 6 |
| MATHEMATICS 8 | 6 |
| MATHEMATICS 8A | 7 |
| ALGEBRA 1 REGENTS - For Advanced 8th Graders | 7 |
| SCIENCE | 8 |
| SCIENCE 7 - Life Science | 8 |
| SCIENCE 7/8X | 8 |
| SCIENCE 8 - Physical Science | 9 |
| SCIENCE 8X - Accelerated Living Environment (Biology) | 9 |
| WORLD LANGUAGES | 10 |
| FRENCH & SPANISH | 10 |
| NEW YORK STATE SEAL OF BILITERACY - Planning for the Future | 11 |
| PHYSICAL EDUCATION | 12 |
| MUSIC | 13 |
| JUNIOR BAND | 13 |
| JUNIOR CHORUS | 13 |
| GENERAL MUSIC 7 | 13 |
| FAMILY AND CONSUMER SCIENCES | 14 |
| HOME & CAREERS 7 | 14 |
| HOME & CAREERS 8 | 14 |
| JUNIOR HIGH ART | 15 |
| ART 7 | 15 |
| ART 8 | 15 |
| COMPUTER APPLICATIONS & KEYBOARDING | 16 |
| INTRO TO COMPUTER APPLICATIONS & KEYBOARDING 8 | 16 |
| HEALTH | 17 |
| HEALTH 7 | 17 |
| HEALTH 8 | 18 |
| TECHNOLOGY | 19 |
| INTRO TO TECHNOLOGY 7 | 19 |
| INTRO TO TECHNOLOGY 8 | 19 |

ENGLISH

In 2015, New York State (NYS) began a process of review and revision of its current English Language Arts Learning Standards adopted in January 2011. The New York State Next Generation English Language Arts Learning Standards (Revised 2017) and Grades 6-12 Literacy Standards in History/Social Studies, Science, and Technical Subjects (Revised 2017) consist of revisions, additions, deletions, vertical movement, and clarifications of the current English Language Arts Standards. They are defined as the knowledge, skills, and understanding that individuals can and do habitually demonstrate over time because of instruction and experience.

ENGLISH 7

The English 7 course is designed to engage students in a comprehensive exploration of reading, writing, speaking, and listening skills as outlined by the New York State Next Generation English Language Arts (ELA) Learning Standards. Through a dynamic and student-centered curriculum, students will develop the critical thinking, analytical, and communication skills necessary for success in academic and real-world contexts.

Students will engage with a diverse selection of literary and informational texts, including novels, short stories, poetry, and articles, which reflect varied perspectives and cultural experiences. The course emphasizes deep comprehension, text analysis, and vocabulary development while encouraging students to make meaningful connections between texts and their own lives. Writing instruction will focus on crafting clear and coherent narratives, informative essays, and arguments supported by textual evidence.

Key skills and practices include:

- Reading: Close reading of grade-level texts to analyze themes, central ideas, character development, and text structures.
- Writing: Developing skills in narrative, argumentative, and informative writing, with a focus on planning, revising, and editing.
- Speaking and Listening: Participating in collaborative discussions, delivering presentations, and evaluating spoken and multimedia content.
- Language: Expanding vocabulary and understanding grammar, usage, and conventions in context.

The course integrates Notice and Note signposts, writing workshops, media literacy, and formative assessments to guide instruction and support differentiated learning. Students will analyze and evaluate the influence of media in shaping perceptions and messages, gaining skills to critically engage with various forms of digital and traditional media. Opportunities for creativity, collaboration, and critical reflection are embedded throughout, ensuring that students build a strong foundation in literacy that prepares them for future academic challenges.

ENGLISH 8

The grade eight English curriculum strives to make connections across the curriculum, particularly with social studies, where literary parallels are so apparent. Readings are selected to enhance and enrich the language experience, to serve as exemplars of the genre they represent, and to allow the student to find relevance and value in fine literature.

Students will explore and practice reading, writing, speaking, and listening as mandated by the curriculum and will prepare for the state's English Language Arts Exam to be given to all eighth-graders in April.

The course grade is based on homework, writing assignments, quizzes and tests, oral presentations, projects, and class participation. Certain assignments may be weighted more heavily than others, particularly if they represent a lengthy unit of study. Students are always advised in advance if such a weighting is to occur.

In addition, the following skills are emphasized at this grade level and are considered vital to overall success: organization of time and materials, responsibility, accountability, discipline, and respect for self and others.

Reading:

Support services in reading are provided in small classes in the Reading Center. Eligible students meet two to four periods per week and concentrate on reading comprehension, vocabulary, and study skills.

SOCIAL STUDIES

- ❖ Guided reading and notes.
- ❖ Discussions and activities (map-making, charts, etc.).
- ❖ Test or quiz every week.
- ❖ Mark is based on test scores, quality of work – including homework – and effort.
- ❖ Interdisciplinary activities involving English, science, and math.
- ❖ Skills – Analyzing documents, understanding the perspective, and identifying and analyzing enduring issues.

SOCIAL STUDIES 7

Material covered: United States and New York State History

- Native Americans
- Colonial Developments
- American Independence
- Historical Development of the Constitution
- The Constitution in Practice
- Westward Expansion
- Reform Movements
- A Nation Divided

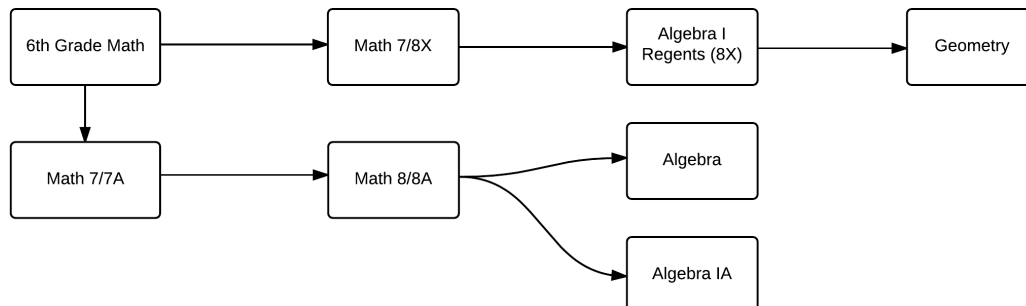
SOCIAL STUDIES 8

Material covered: from the Civil War to the Modern Era 1990s

- Reconstruction
- Westward Movement
- Imperialism
- Cultural Reforms
- WWI and WWII
- Roaring Twenties
- Depression of the 1930s
- The Cold War and the 50's
- Civil Rights & Social Change
- Vietnam
- The Conservative Revolution

MATHEMATICS

The following diagram shows the implementation of the math curriculum:



MATHEMATICS 7/7A

The curriculum is aligned with the Next Generation Learning Standards. Topics include Rational Numbers, Algebra, Ratio & Proportions, Percents, Geometry, and Statistics and Probability. The course will require students to have a deep conceptual understanding of new topics combined with mathematical fluency of facts to apply the information to the real world. Students will have homework daily as well as a weekly graded homework assignment. The New York State exam will be given in the spring.

MATHEMATICS 7/8X - Advanced Placement (AP) Pathway for 7th Graders

Class participation is limited to students who are selected based on several factors including teacher recommendation, state test scores, performance on math skills tests, and iReady scores. Students who were not initially selected, have the opportunity of being selected at the end of Quarter 2, provided they complete mandatory retroactive work during 10th period by a set completion date. All accelerated students will complete mandated summer work before entering Algebra 1 the following year. Students who are not selected for the Advanced Placement Pathway in 7th grade will be able to apply to enter this pathway in grade 10 or grade 11, if eligible. This pathway expects to complete AP Calculus in grade 12.

The units covered are the same as Mathematics 7 and more advanced algebra, linear equations, radicals, non-proportional relationships, and integral exponents. The New York State exam will be given in the spring. Students are required to maintain a quarterly average of at least 90 to remain in the accelerated class.

MATHEMATICS 8

This course is a continuation of the Pre-Algebra/Algebra topics learned in 7th grade. There is a New York State Mathematics 8 Assessment in May. Review and new topics include the number system, expressions and equations, functions, geometry, probability, and statistics.

Completion of Mathematics 8 will lead to placement in either the 1-year Algebra I course or recommendation to the 2-year Algebra I course pathway.

MATHEMATICS 8A

This course includes most of the Mathematics 8 topics. Mathematics 8A is designed for students who have demonstrated a need for alternative learning opportunities and pacing within the Mathematics 8 curriculum.

Completion of Mathematics 8A will lead to placement in the 2-year Algebra I course pathway.

ALGEBRA 1 REGENTS - For Advanced 8th Graders

This course will cover Algebra topics, including relationships between quantities, reasoning with equations, linear and exponential relationships, expressions and equations, quadratic functions and modeling, and descriptive statistics. Certain number systems, geometry, and probability topics from the 9th-grade curriculum must also be covered.

Accelerated Mathematics 8X/Algebra I students will complete the New York State Algebra I Regents Exam in June. Completion of this course with an 85 average or better will lead to placement in Geometry.

SCIENCE

SCIENCE 7 - Life Science

Life Science is the study of living things; plants and animals, and their interactions within the environment. Throughout the year our topics of study include:

- The Inquiry Method: How to solve problems in Science.
- Metrics: Measurements, Density, The Microscope
- The Cell: Cell Theory, Cell Structures, Cellular Processes
- Cellular Division: Mitosis, Meiosis, and Reproduction
- Genetics and Heredity: Inheritance, Punnett Squares, and Pedigree charts
- Evolution: Natural selection, Adaptation, Research Project
- Environmental Conservation: Ecology, Symbiosis, Biodiversity
- Cycles of Energy: Food Chains, Food Webs, and Energy Pyramids, Cycles of matter
- Human Body: Skeletal, Muscular, Digestive, Circulatory, Respiratory, Excretory, Nervous, and Endocrine

Throughout the year, various labs are performed which reinforce course material learned. Also, a major research project coinciding with the animal kingdom is integrated with 7th grade English.

SCIENCE 7/8X

Accelerated Science 7

Participation in the course is limited and is designed for accelerated 7th-grade science students. Students will be selected based on several measures: Performance on the Math Power and Science T.O.L.T. (test of logical thinking) tests, as well as State Test scores and teacher recommendations. Students will participate in the integrated Science 7 Life Science as well as the Physical Science 8 curricula, in preparation for entering Regents Earth Science in 8th grade with an emphasis on lab report writing skills. Students must also maintain a 90% quarterly average to remain in this course. Throughout the year our topics of study include:

- The Inquiry Method: How to solve problems in Science.
- Metrics: Measurements, Density, The Microscope
- The Cell: Cell, Theory, Cell Structures, Cellular Processes
- Cellular Division: Mitosis, Meiosis, and Reproduction
- Genetics and Heredity: Inheritance, Punnett Squares, and Pedigree charts
- Evolution: Natural selection, Adaptation, Research Project
- Atoms: Atomic Structure, Electron Configuration, Periodic Table of Elements
- Mixtures and Compounds: Physical and Chemical changes. Atomic Bonding
- Forces and Motion: Newton's Laws of Motion, Speed, Acceleration, Momentum, Gravity
- Thermal Energy: Heat, Temperature, and Heat Transfer
- Electromagnetic Spectrum: Wavelength, Frequency, Amplitude.

SCIENCE 8 - Physical Science

Physical Science is a survey course that covers topics from both physics and chemistry. The physics component includes mechanics, energy, electrostatics, electromagnetism, and wave physics. The chemistry component includes the particle nature of matter, physical and chemical change, bonding, molecular structure, and chemical reactions. Students are graded on tests, quizzes, various activities, homework, and lab work. Students will work on lab report writing skills in order to prepare them for 9th grade Earth Science lab requirements.

SCIENCE 8X - Accelerated Living Environment (Biology) Regents

Prereq: Science 7/8X

This course will be primarily offered to students who have entered the accelerated science program in junior high. The course curriculum will follow the Regents Biology Syllabus, but will include areas in which greater detail or enhancement of processes will be discussed. The course will be more challenging than the Regents Biology class. Labs will be an integral part of this course as in Regents Biology, but will be more intensive and challenging. The students will take the Biology Regents exam at the end of the year. This course will provide students with a high-level academic Biology course, thus providing a smoother transition to AP Biology. Students entering this biology course may ONLY be enrolled with prior approval, based on the criteria established by the science department. Students, who meet the course criteria, and who are enrolled, will be expected to maintain the academic standards of the class as set forth by the science department and must maintain an 85% average. If, at any time, a student is not meeting the established standards, a conference with the student, parent/guardian, teacher, principal and head of the science department, will determine whether the student shall remain enrolled in the course.

WORLD LANGUAGES

FRENCH & SPANISH

The French and Spanish 7 courses are designed to recycle and to expand upon the basic French/Spanish linguistic and cultural concepts taught in the elementary school. French and Spanish 8 delve further into the vocabulary, expressions, and structures of each language, culminating in the Checkpoint A Exam in June. Both courses emphasize the four areas of language acquisition (reading, writing, listening, and speaking) with an emphasis on real-world communication. Language instruction is centered around the three modes of communication; interpersonal, interpretive, and presentational modes as outlined by the New York State Office of Bilingual Education and World Languages and the American Council on the Teaching of Foreign Languages (ACTFL). Wherever possible, students at both levels and in both languages, are exposed to authentic texts, cultural experiences, and to native speakers from the target cultures.

Students at both levels progress through increasing levels of proficiency in all four areas of language acquisition. Students acquire language via scaffolded paired and whole-group discussion, choral response, music, movies, TV programs, commercials, print advertisements, articles, poems, mini-novels, and other informational texts intended for the target culture. Language and culture are contextualized with the goal of comparing and contrasting students' own cultural perspectives and practices with those of the target culture.

Students are required to pass BOTH their French/Spanish 7 AND French/Spanish 8 classes as well as the Checkpoint A Exam in order to earn the one unit of credit required for graduation. One high school unit of credit in World Languages (Checkpoint A Proficiency) is required for graduation in NYS.

Topics of study include:

- Personal Identification
- Family/Family Life
- School and Education
- Days/Months/Seasons
- Shopping/Numbers
- Community and Neighborhood
- Food and Meal-taking
- Physical Environment and Weather
- Travel/Leisure

Grading:

Grades are based on an average of class participation, homework, quizzes, essays, tests, projects, and presentations. Homework is assigned frequently for review of vocabulary and structures presented in class.

NEW YORK STATE SEAL OF BILITERACY - Planning for the Future

As a junior high school World Language student, it is never too early to begin thinking about how the study of a second language can be beneficial. Junior high students may want to begin the planning to pursue the New York State Seal of Biliteracy during their high school language study years. The New York State Seal of Biliteracy is a graduation accreditation that indicates that a student has achieved the Intermediate High Level of language proficiency (aligned with the standards of the American Council of the Teachers of Foreign Languages) in both English and a second language. Upon successful completion of the NYSSB, a student will earn a seal on his/her diploma with this designation. A student in the process of earning the seal and who is applying to colleges may designate that he/she is a "Candidate for the NYSSB." The work required for this class will be completed on students' own time and/or during some class periods of the French 221 or Spanish 200 class. Students will work under the guidance of a mentor.

Lake George Jr. - Sr. High School World Languages Department in conjunction with the LG NYSSB Committee is offering the NYS Seal of Biliteracy in order to:

- Promote the study of languages
- Celebrate diversity
- Acknowledge students' proficiency in both English and another language
- Support college and career readiness initiatives
- Support 21st skills
- Recognize students from a variety of cultural backgrounds

Guidelines:

Interested students should:

- Be enrolled in/plan to enroll in French 221 or Spanish 200
- Earn a grade of 85% or higher on the Checkpoint B World Languages Exam
- Complete all aspects of the application process by the designated date
- Be prepared to select a mentor for the 2-point project pathway option
- Be prepared to present their project to a panel

PHYSICAL EDUCATION

Our Physical Education curriculum offers a variety of activities to promote lifelong physical wellness. This includes individual/team sports as well as fitness and recreational activities in a co-educational environment designed to promote cooperative learning through sport and social interaction. The emphasis for grading is based on participation and skill performance along with formative and summative assessments.

Grades:

- Physical Education is required each year by the New York State Department of Education. Students who receive a passing grade in Physical Education will receive .5 credits toward high school graduation. 2.0 credits are needed to fulfill NYS requirements.
- Each student receives a grade based on their ability to meet the NYS Learning Standards as specifically related to the activity that they participate in.
- Each student participates in two or more different activities each quarter/marking period. Student's grades are calculated based on the following criteria:
 - Social and behavioral responsibility/class participation (4 pts. per class): 80%
 - Skill Assessments, Application, Strategy & Cognitive knowledge: 20%

Class Requirements:

- All students are encouraged to change their clothing for class. This includes a pair of shorts or sweats and a T-shirt (with sleeves) or sweat top. A pair of athletic sneakers is required. Each student shall be issued a lock and locker in which to keep his/her clothing in.
- The students' social/behavioral responsibility/participation grade is based on being in attendance and prepared to participate. Each student is expected to make a satisfactory effort to accomplish the skills of the day's lesson. Each student will receive 0-4 points according to his/her level of participation. Students who are absent from a class will also lose participation points for that day. Students may come in during a free period or study hall to make up classes as long as their high school class has PE that period. Make-up PE classes will also be held every Thursday of the quarter. Students who know they will be absent on a PE day may "bank" a make-up. Students who are unprepared for PE class will NOT be allowed to make up that class. Students are encouraged to speak with the PE teachers if they have questions or concerns about their absences. Students who are absent because of a band lesson or school-sponsored field trip DO NOT have to make up that class.

Medical Excuses:

If a student is temporarily unable to participate in their regular Physical Education program, they must provide the school nurse with a note from a physician or appropriate medical professional. This note should reflect the student's physical limitations. Physical Education staff will provide adapted activities (based on the note) for the student to participate in during the dates of limitation duration. Ex. A student with a knee injury may have a physician's note stating the student can participate in an upper body program only. (Lake George Jr. Sr. High School has a Certificate of Medical Limitations form which can be provided at the family's request.)

Important: A student with a medical note removing them from ALL Physical Education activities for a duration of time will be required to make up all missed classes.

MUSIC

JUNIOR BAND

The Junior Band is an elective performing group, which is open to students in grades 7 and 8. Students will be accepted in Junior Band if they participated in elementary band or have satisfactorily completed an audition with the band director. Junior Band meets five days a week; in addition, each member is required to attend one music lesson every eight school days, which is based on a rotating schedule. Satisfactory completion of the course will require the band member to attend all concerts at which the Junior Band performs.

JUNIOR CHORUS

The Junior Chorus is an elective performing group, which prepares for and performs three concerts a year. It is open to all students. For all three concerts, there is ample opportunity for solo and small ensemble work. High-interest students are invited to participate in Vocal All-County (a chorus made up of the top choral students from 11 area schools) as well as NYSSMA (adjudicated solo work). The students may participate in various authentic musical experiences including an annual trip to New York City to see a Broadway musical. Students may take junior chorus daily (9th period) or they may take both band and chorus every other day.

GENERAL MUSIC 7

Meets every other day for one semester.

Through extensive use of computers and synthesizers, Garage Band, iTunes, and YouTube, students explore musical concepts. They analyze the group STOMP and create their own percussion piece, they create a time capsule that focuses on one artist/band to relate contemporary music to world events, and they compose original pieces. They also learn to evaluate and critique current music, engaging in increasingly higher thinking processes. For 7th grade students only.

FAMILY AND CONSUMER SCIENCES

HOME & CAREERS 7

20-week course, every other day.

This course is designed to help adolescents live in a society of constant change and to improve their quality of life by preparing them to meet present and future responsibilities as family members, consumers, and home managers.

These skills will be applied to all areas of daily living using a variety of learning activities that will also integrate academic concepts of Math, Art, Reading, and Science. Concepts learned in this unit will integrate personal development, self-awareness, getting along with others, resource, and personal management, and organization.

In this course, practical learning skills will be applied in the textile production of simple sewing projects, learning of basic hand sewing techniques, sewing terms, and operation of a sewing machine. Hands-on skills will be applied during the duration of this course and evaluation is assessed through homework, small sewing tasks, quizzes, a simple sewing project, and community service. A comprehensive, objective final exam on information learned and practiced in the course will be calculated into the final average.

HOME & CAREERS 8

10-week course, every day.

Subject matter in this class serves as a continuation of the application of the process and management skills learned in 7th grade with a focus on basic, home-made foods production labs, learning of kitchen tools and terms, basic measuring equivalents, and safety in the kitchen. Students will practice the principles of time management, safety, and decision-making by preparing several food labs. Practical learning skills will be applied during the duration of this course and evaluation is assessed through self-evaluation, food lab plans, quizzes, and community service. A comprehensive, objective final exam on information learned and practiced in the course will be calculated into the final average.

JUNIOR HIGH ART

ART 7

20-week course, every other day.

Students will experience a wide range of art experiences that are project and journal-based. Art journals are created and weekly journal assignments are given as a way to enhance and expand upon what is learned in the classroom. The course is designed to build upon elementary-based knowledge and further investigate technique, concept, style, and use of art materials. Student projects meet NYS Visual Art Standards and are assessed using objective-based rubrics.

At least one artwork from each student will be showcased at the annual Lake George Middle School Art Show, which is held every May at a location within our community.

ART 8

20-week course, every other day.

This course is designed to further expand upon the knowledge learned in 7th Grade Art. Weekly art journal assignments are continued as part of the curriculum. Graphic design, ceramics, and exposure to more formal techniques in art are incorporated into the semester projects, which makes this course unique! The course is also designed to prepare students for the curriculum fundamentals of the ninth-grade course offering Studio in Art. Student projects meet NYS Visual Arts Standards and are assessed using objective-based rubrics.

At least one artwork from each student will be showcased at the annual Lake George Middle School Art Show, which is held every May at a location within our community.

COMPUTER APPLICATIONS & KEYBOARDING

INTRO TO COMPUTER APPLICATIONS & KEYBOARDING 8

10 weeks, every day.

A required course for all eighth-grade students, which serves as an introduction to various computer applications (word processing, presentation graphics, and spreadsheet programs) and keyboarding. Students will learn local as well as cloud-based file and folder management skills. Students will also learn how to upload/download files and understand various file types and conversion of files. Students will learn the proper touch-typing technique for keyboarding and apply this knowledge to their learning of the alphabetic keyboard. Students will also learn basic formatting skills for various business and academic-related documents including reports, business letters, flyers, etc. Students will also learn and practice effective proofreading and editing skills and apply these skills in their document preparation and finalization. Students will learn about the importance of safety when using technology.

HEALTH

Students in New York State are required to complete 20 weeks of Health Education by the time they complete junior high. To satisfy this mandate, Lake George students complete 10 weeks (1/2 semester) of Health Education in each of their 7th and 8th grade years.

Using the NYS Learning Standards as guidelines, students will integrate the knowledge of the basic body systems with an understanding of the changes that accompany the life cycle, particularly adolescence. They will also be looking at their own behaviors physically, mentally, and socially, and that of others for positive and negative ways of dealing with important issues.

HEALTH 7

10 weeks, every other day.

The following units of study are covered.

MENTAL AND EMOTIONAL HEALTH

- What is health
- How to make responsible decisions
- Developing good character
- NYSED Mental Health Literacy in Schools

FAMILY AND SOCIAL HEALTH

- Becoming a responsible family member
- Resolving conflict
- Developing healthful relationships
- Abstinence

GROWTH AND DEVELOPMENT

- Puberty
- How to take care of your body

NUTRITION

- Dietary guidelines
- Eating habits
- Foodborne illnesses
- Eating disorders

PERSONAL AND PHYSICAL HEALTH

- Regular examinations
- Be well-groomed
- Physical activity

ALCOHOL TOBACCO & OTHER DRUGS

- Drugs- prescription, OTC, illegal
- Drug use, misuse, and abuse
- Resisting pressure to use drugs

COMMUNICABLE AND CHRONIC DISEASES

- Reducing the risk of communicable diseases
- HIV
- Chronic diseases

ENVIRONMENTAL

- Conserving resources
- Preventing pollution

HEALTH 8

10 weeks, every other day.

The following units of study are covered:

MENTAL AND EMOTIONAL HEALTH

- Developing fitness
- Manage stress and be resilient
- NYSED Mental Health Literacy in Schools

FAMILY AND SOCIAL HEALTH

- Abstinence
- Marriage and parenthood

GROWTH AND DEVELOPMENT

- Puberty
- Pregnancy and childbirth
- Age in a healthful way
- Expressing grief

NUTRITION

- Maintaining a desirable weight
- Eating disorders

PERSONAL AND PHYSICAL HEALTH

- Injuries during physical activity

- Developing fitness

ALCOHOL TOBACCO AND OTHER DRUGS

- Drugs- prescription, OTC, illegal
- Drug use, misuse, and abuse
- Resisting pressure to use drugs

COMMUNICABLE AND CHRONIC DISEASES

- Reducing the risk of communicable diseases
- STDs
- HIV
- Cardiovascular disease and cancer

FIRST AID AND CPR

- First Aid, Heart Association Certification
- CPR, Heart Association Certification

TECHNOLOGY

Students in New York State are required to complete 40 weeks of Technology Education by the time they complete junior high school. To satisfy this mandate, Lake George students complete 20 weeks (1 semester) of Technology Education in each of their 7th and 8th-grade years. In addition, 8th-grade students must also pass the NYS Intermediate Technology Education Assessment with a minimum proficiency. In junior high, students are introduced to the engineering process (IDEAL System) to assess and solve problems.

- I = Identify specific problems
- D = Describe possible solutions (brainstorm)
- E = Evaluate solutions and make decisions
- A = Act by constructing and testing models
- L = Learn by studying test data and optimizing

Major concepts (themes) included in each junior high study include problem-solving, critical thinking, communication and presentation skills, group dynamics, career exploration, machine and tool application, and product development.

INTRO TO TECHNOLOGY 7

20 weeks, every day.

Students will form problem-solving (engineering) teams to complete the following unit studies:

- What is Technology (Science vs Technology)
- The History of Technology (Exponential Growth)
- Measurement (Standard and Metric)
- Introduction to Design (Orthographic Projection)
- Magnetic Levitation (Future Transportation)
- Computer Programming (GUI Programming-Logo Robots)
- Future City Design (Computer Simulation)
- Structural Systems (Balsa Models)

INTRO TO TECHNOLOGY 8

20 weeks, every day.

Students will review the IDEAL Problem-Solving system before completing the following unit studies.

- Manufacturing & Automation (Robotic Arm)
- Introduction to Computer-Aided Design (CAD Floor Plan Design)
- Open and Closed-Loop Systems (Lego Systems)
- Introduction to Electricity (Catch the Bug)
- Alternate Energy Infomercial (Moviemaker)
- What is New in Nanotechnology (Group Presentation)