



FAIRFAX COLLEGIATE SUMMER 2015

WRITING • READING • MATH • SCIENCE • TEST PREP
PUBLIC SPEAKING • ENGINEERING • ROBOTICS • PROGRAMMING
ART • DESIGN • FILMMAKING • BOOSTER WEEK

12
NO. VA
LOCATIONS

AGES
8 TO 14

FAIRFAX COLLEGIATE SUMMER 2015

This summer your child can have fun *and* learn!

Since 1993, the Fairfax Collegiate Summer Program has provided challenging and engaging courses in writing, reading, math, science, test prep, public speaking, engineering, robotics, programming, art, design, filmmaking, and music.

Small classes take place in a relaxed and informal atmosphere at our twelve locations throughout Northern Virginia. Courses are built around creative activities that are captivating and entertaining, as well as informative.

Summer Program instructors include undergraduate and graduate students at leading universities, as well as area public and private school teachers. They take into account each student's interests and needs, and students are able to get help from an instructor at any time. Breaks include soccer, basketball, and other sports.

Over 4,000 students attended Fairfax Collegiate programs last year. Register today to reserve your child's opportunity for academic and creative growth at Fairfax Collegiate!

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ACADEMICS, ARTS, TECHNOLOGY—A NEW UNITY!



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PROGRAM OVERVIEW

Alexandria Campus

Beth El Hebrew Congregation
3830 Seminary Rd.

Ashburn Campus

Loudoun School for the Gifted
44675 Cape Ct.

Chantilly Campus

St. Timothy Catholic School
13809 Poplar Tree Rd.

Dulles Campus

St. Veronica Catholic School
3460 Centreville Rd.

Fairfax Campus

Gesher Jewish Day School
4800 Mattie Moore Ct.

Falls Church Campus

St. Katherine Greek Orthodox Church
3149 Glen Carlyn Rd.

Herndon Campus

St. Joseph Parish Hall
750 Peachtree St.

Leesburg Campus

Loudoun Country Day School
20600 Red Cedar Dr.

McLean Campus

Redeemer Lutheran Church
1545 Chain Bridge Rd.

Reston Campus

Northern Virginia Hebrew Congregation
1441 Wiehle Ave.

South Reston Campus

Al Fatih Academy
12300 Pinecrest Road

Vienna Campus

Green Hedges School
415 Windover Ave.

Session Dates

Session I June 22 to July 3
Session II July 6 to July 17
Session III July 20 to July 31
Session IV August 3 to August 14
Session V August 17 to August 28

Program Times

Morning 8:30 a.m. to 12:00 p.m.
Afternoon 12:30 p.m. to 4:00 p.m.
Full Day 8:30 a.m. to 4:00 p.m.

Extended Care Times

Morning 7:30 a.m. to 8:15 a.m.
Afternoon 4:15 p.m. to 6:00 p.m.

Program Fees

Sessions I-V (10 days)
Full Day \$790 per session
Half Day \$485 per session
Extended Care
Full Day \$170 per session
Half Day \$85 per session

Discounts

Siblings or Multiple Sessions 5%
Early Registration and Payment 5%
(The Early Registration and Payment deadline is March 15, 2015.)

Five Ways To Register

Register online at <http://www.Fairfax-Collegiate.com>. Register by phone at 703 481-3080. Register by fax or mail by visiting our website and downloading and printing a registration form. Register in-person at an open house or our office.

Open Houses

We will host four open houses during the spring. Please visit <http://www.Fairfax-Collegiate.com/openhouses> for up-to-the-minute information and to R.S.V.P.

Office Address

722 Grant St., Suite J
Herndon, VA 20170
703 481-3080 • Fax 703 481-3081



WRITING AND READING

Writing Fundamentals

Grades 3-4

Students write and revise sentences, paragraphs, and short essays.

This course emphasizes word choice, spelling, sentence structure, paragraph organization, and proofreading.

Instructors provide detailed suggestions for improving spelling and grammar as well as ideas and organization.

Writing & Revising

Grades 3-4

Students write, revise, and discuss personal narratives, essays, short stories, and poems.

Topics include writing organized paragraphs, constructing persuasive written arguments, providing constructive criticism, and revising drafts. Instructors provide detailed written and verbal feedback on student work.

The final project is a class literary anthology.

Illustrated Stories

Grades 3-4

Students read, write, and draw accompanying artwork for illustrated stories in different genres.

Students practice writing complete sentences, paragraphs, and stories. Genres include comic strips, graphic novels, manga, children's picture books, and storyboards.

For a final project, students write and illustrate a story in the genre of their choice.

Reading Reinforcement

Grades 3-4

This course emphasizes reading as well as writing.

Students read, discuss, and respond to diverse readings including poems, fables, stories, essays, and journalism.

Assignments include summaries, reading comprehension exercises, and interpretations.

Reading Newbery Winners

Grades 5-6

Every year the American Library Association awards the Newbery Medal for the best new work of literature for children.

In this course students read, discuss, and write about two Newbery Award-winning books selected by the instructor.

Students keep their copies of the books and learn how to use underlining, margin notes, and diagramming to improve comprehension.

Writing Skills & Grammar

Grades 5-6

This writing course focuses on organization, paragraph construction, grammar, spelling, and mechanics.

Topics include brainstorming, outlining, thesis statements, sentence structure, transitions, essay organization, active voice, word choice, and common errors.

The Writing Process

Grades 5-6

Students prewrite, draft, revise, edit, and share fiction, nonfiction, and poetry.

Instructors guide students through each step of the writing process and provide detailed feedback. Students improve their ideas, organization, spelling, and mechanics.

For a final project, students create a class anthology of essays and stories.

Creative Writing

Grades 5-6

Students read, write, and discuss personal narratives, short stories, plays, and poems.

Students revise drafts of their works based on instructors' written comments.

The final project is a class literary anthology. Students may enter their works into writing contests.

Strategic Reading

Grades 5-6

Students learn and apply reading strategies and tools including close reading, looking for cause and effect, note-taking, outlining, paraphrasing, questioning, skimming, summarizing, and synthesizing.

Students write and revise responses to readings from newspapers, essays, biographies, speeches, and short stories.

Short Story Writing

Grades 5-6

This is a fast-paced, advanced class for students who are enthusiastic writers.

Students read and discuss great short stories and write and revise their own stories.

Topics include point of view, character, conflict, plot, setting, atmosphere, dialogue, and narrative voice.

The final project is a class anthology of short stories. Instructors help students submit their best work to writing contests.

Epic Fantasy

Grades 7-9

In this introduction to the epic fantasy genre, students read and write stories set in immersive worlds of magic and mythical creatures. Discussions focus on literary elements such as the hero's journey, symbolism, and the struggle of good against evil.

Reading passages are taken from classic and modern fantasy series, such as *The Lord of the Rings* by J.R.R. Tolkien, *The Chronicles of Narnia* by C.S. Lewis, and *The Wheel of Time* by Robert Jordan.

Grammar, Usage & Style

Grades 7-9

Students learn how to “make every word tell” by practicing the principles of correct usage and plain English style.

Topics include rules of usage, principles of composition, matters of form, commonly misused expressions, writing for clarity, and key grammatical terms.

Writers' Workshop

Grades 7-9

Writers' Workshop classes provide middle school students with intensive practice in writing. Classes are small-group seminars.

Students learn the entire writing process including brainstorming, outlining, composing, editing, and revising.

Writing assignments include short stories, poems, articles, and personal essays.

Reading for Meaning

Grades 7-9

This is an introduction to critical reading and writing. Genres include short stories, journalistic writing, essays, and poetry.

Classroom exercises develop important literary analytical tools including compare/contrast, cause/effect, and prediction.

Students write a variety of compositions on the results of their analyses and the literary themes expressed in the texts. They also write an original work.

Dystopian Futures

Grades 7-9

Dystopian literature imagines future societies with horrible flaws—whether oppression, violence, poverty, or fear. In this class, students explore the relationship between these futures and today's society and analyze the world around them to create their own dystopian futures.

Readings will include excerpts from popular dystopian novels such as *The Hunger Games* by Suzanne Collins, *Divergent* by Veronica Roth, and *Nineteen Eighty-Four* by George Orwell.

Satire & Parody

Grades 7-9

Though works of satire and parody are usually humorous, they aim to expose core flaws in society, politics, and ways of thinking. In Satire and Parody, students learn how the tools of irony, sarcasm, and exaggeration can be used to thoughtfully critique works and ideas.

Students write their own satires and parodies, and read examples such as *The Hitchhiker's Guide to the Galaxy* by Douglas Adams, Terry Pratchett's *Discworld* novels, and articles from *The Onion*.



Fairfax Collegiate Math

Grades 3-4 & Grades 5-6

Students learn, practice, and review key math concepts and skills.

The course diagnostic test is aligned with the Virginia Standards of Learning. Instructors individualize assignments and group students based on diagnostic test results.

Daily activities include small-group instruction and discussion, individual work, enrichment, and math games.

Fairfax Collegiate Math 3-4 topics include multiplication, division, fractions, decimals, geometry, probability, and estimation.

Fairfax Collegiate Math 5-6 topics include fractions, decimals, pre-algebra, geometry, probability, statistics, and number theory.

Math Fundamentals

Grades 3-4

Students practice and develop basic math skills. They reinforce single- and multi-digit operations with individualized practice and small group activities.

Lessons focus on mastering fundamental concepts and applying skills to a wide variety of problem types. Topics include whole number operations, fractions, and word problems.

Word Problems

Grades 3-4 & Grades 5-6

Students review math concepts and learn techniques to solve single- and multi-step word problems.

This individualized course is appropriate for a range of students. Instructors use diagnostic test results to group students, design lessons, and assign problem sets.

Students work on different types of problems based on their current level. The types of word problems that students work on include integer, decimal, fraction, percent, proportion, measurement, probability, statistics, algebra, and geometry problems.

Thinking Skills

Grades 3-4

This course for advanced students is an introduction to logical problem solving. Students develop logical reasoning and critical thinking through solving advanced math and logic problems. Instruction emphasizes both abstract analysis and concrete strategies.

Problem-solving topics include word problem strategies, deductive reasoning, and multi-step problems. Math topics include whole number operations, geometry, place value, measurement, fractions, and graphs.

Problem Solving

Grades 5-6

Advanced students prepare for middle school math by learning and practicing strategies to solve challenging math problems.

Topics include generic problem solving approaches, the four-step method, problem re-statement, visualization, sequences, number patterns, working backwards, ratio problems, and logic.

Activities include discussion, problem sets, receiving individual coaching from instructors, and reviewing problem solutions.

Cryptography

Grades 5-6

Make and break secret codes using math and logic! Students learn the historical evolution of cryptography in a hands-on exploration of real-world codes, including Caesar ciphers, substitution ciphers, Vigenère ciphers, affine ciphers, and RSA encryption.

As a final project, students develop their own cryptosystem.

Math topics include modular arithmetic, factoring, inverse functions, exponents, and prime numbers.

Brain Games

Grades 5-6

Students develop logical and mathematical thinking by playing games, completing puzzles, and analyzing strategies. Games and puzzles include checkers, chess, go, Monopoly, Hoshiwokeru, Math 24, Stratego, Resistance, Rubik's cubes, and math enrichment games.

Math and logic topics include binary algebra, spatial reasoning, decision analysis, game theory, algorithms, basic economics, and mental math.

As a final project, students create their own mathematically-balanced board games.

Intro to Pre-Algebra

Grades 6-8

Students prepare for Pre-Algebra by learning and reviewing basic algebraic concepts.

On the first day of this individualized course, students take diagnostic tests to help tailor personalized curricula.

The course begins with a review of arithmetic, fractions, exponents, and decimals. Students then learn how to simplify, solve, and graph algebraic equations.

Intro to Algebra

Grades 7-9

Students prepare for Algebra I by studying key pre-algebra and algebra concepts.

This is an individualized course. Students complete a diagnostic test on the first day of class to identify their specific needs.

The sequence of topics includes negative numbers, variables, terms, expressions, equations, polynomials, rational numbers, rational expressions, and quadratics.

Intro to Geometry

Grades 7-9

This is an individualized course for students preparing for middle school and high school Geometry.

Students complete a diagnostic test on the first day of class to identify specific needs.

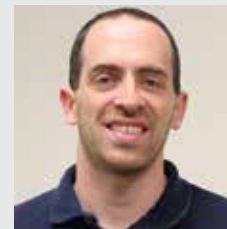
The sequence of topics includes lines, segments, circles, squares, angles, parallel lines, triangles, and polygons.

Contest Math

Grades 7-9

Students work individually and in small groups to prepare for math competitions including the Mathematics Olympiad, MathCounts, AMC 8, and AMC 10.

Instructors group students based on students' goals and diagnostic test results. Students discuss concepts and strategies, solve and review problem sets, complete exams under simulated contest conditions, and work individually with instructors.



"I love the opportunity to teach small classes and individualize my instruction."

Jacob Hirsch
Mathematics Instructor



Chemistry Concepts

Grades 3-4

Students perform experiments to learn about key chemistry concepts: matter, forces, heat, energy, phase changes, acids, bases, and reactions.

Students also learn important chemistry terminology and laboratory methods.

Students work in small groups. Instructors closely supervise students, and experiments are age-appropriate and use only non-hazardous chemicals and supplies.

Dinosaurs

Grades 3-4

This is a hands-on introduction to paleontology, the scientific study of dinosaurs.

Students learn about dinosaur fossilization, evolution, ecology, biology and behavior.

Activities include a fossil find, dinosaur track analysis, rock and fossil identification, bone and dinosaur teeth analysis, fossil excavation, and fossil assembly.

Science Olympiad

Grades 3-4 & Grades 5-6

Students practice for the Science Olympiad (<http://www.soinc.org>). Teams compete in events covering scientific knowledge, processes, and applications.

Practice event topics include earth sciences, physics, astronomy, biology, and chemistry.

Spy Science

Grades 3-4

Students learn the secrets of spying, sleuthing, and subterfuge. Hands-on activities help students hone their detective skills by teaching real life techniques used in information collection and undercover work.

Topics include fingerprint and handwriting analysis, chemical analysis, forgery identification, homemade spy gadgets and surveillance tools, encryption, and codebreaking. Students conduct spy missions to integrate what they have learned throughout the course.

Human Biology & Anatomy

Grades 5-6

Human Biology & Anatomy is an introduction to human biology and anatomy, focusing on four key organ systems: the cardiovascular system, the digestive system, the nervous system, and the skeletal-muscular system.

Daily class activities include reading assignments, discussions, hands-on exercises, experiments, working with human skeleton and body anatomy models, and medical simulations. Students create life-sized posters of their organ systems

Optics

Grades 5-6

This course introduces students to optics and light. Students work in small groups to gain an understanding of light's properties and applications.

Using an optics bench kit, students will experiment with mirrors, lenses, and filters. Students will gain an understanding of light's properties, experimental design, and theory through classroom demonstrations, experiments, and by replicating historic optics labs.

Topics include light, waves, particles, reflection, refraction, dispersion, mirrors, lenses, and the color spectrum.



Forensic Science

Grades 5-6 & Grades 7-9

This is a hands-on introduction to the science and laboratory techniques of law enforcement.

Lab topics include crime scenes, tool marks, chemical analysis, counterfeit documents, dental impressions, fiber identifications, fingerprints, glass fractures, handwriting analysis, forgeries, ink chromatography, shoe prints, forensic anthropology, blood splatter patterns, and DNA electrophoresis.

As a final project, each class attempts to solve a simulated crime using the forensic techniques learned.

Genetics

Grades 7-9

This is a high school-level presentation of genetics for advanced middle school students.

Topics include Mendelian genetics, the cell, DNA, chromosomes, mutations, cancer, bacterial transformation, recombination, viruses, genetic engineering, transcription and translation, evolution, and the human genome.

Activities include small-group discussion of reading assignments, hands-on activities, demonstrations, short research papers, and student presentations.

Neuroscience

Grades 7-9

Students learn about the nervous system.

Topics include brain structure, motor control, neurons, neurotransmitters, action potentials, signal transduction, potentiation, memory, and neurodegenerative diseases.

Experiments include computer simulations, insect and human motor nerve signal measurement, and brain wave pattern observation and interpretation.

Newtonian Physics

Grades 7-9

This is a high-school level presentation of classical mechanics, including Newton's three laws of motion, for students who are comfortable with basic algebra.

Topics include Newton's Laws, kinematics, inertia, forces, energy, work, friction, vectors, velocity and acceleration.

Experiments explore distance, velocity, acceleration, and force using air tracks, dynamics carts, ballistic cars, pulleys, and spring scales.

Lasers

Grades 7-9

Students learn about laser safety, properties, theory, and design through demonstrations and experiments.

Experiments cover fiberoptics, reflection, refraction, holograms, and lasers as measurement tools. Topics include laser design, laser physics, continuous and pulsed lasers, types of lasers, and laser applications.

Laser projects include measuring refraction indices, navigating laser mazes, experimenting with fiber optics, and building spectrometers.

This course uses only low-power, "eye-safe" lasers, and students wear safety goggles.



"Hands-on experiments make the Fairfax Collegiate science courses so engaging!"
Steve Pak
Science Instructor



PUBLIC SPEAKING AND TEST PREP

Persuasive Speaking

Grades 3-4

Students practice developing and delivering skillful, thoughtful, well-reasoned arguments.

Topics are of direct relevance to students. Students argue both for and against each proposition.

Instructors emphasize mutual courtesy and careful listening.

Public Speaking

Grades 3-4

Students write and deliver short speeches and presentations on topics of their own choosing in a comfortable setting.

Instructors provide detailed individual suggestions for improving both content and delivery.

Students learn how to encourage each other and provide constructive feedback.

Elementary Debate

Grades 5-6

This course introduces elementary students to parliamentary debate.

Debate topics are both challenging and directly relevant to students. The rule structure is less rigid than standard parliamentary debate rules.

Group exercises develop public speaking, critical reasoning, argument construction, rebuttal, and evidence presentation skills.

Speech

Grades 5-6

Students deliver written, extemporaneous, and impromptu speeches.

Instructors critique voice inflection, eye contact, body language, gestures, word choice, visual aids, and tone.

The first week features daily speech exercises. Students research, write, and rehearse individual speeches the second week.

Model Government

Grades 5-6

Students simulate governmental actions, practice public speaking, and learn about the branches of government.

Simulations include Congressional lawmaking, Supreme Court trials, Presidential campaigns, Constitutional amendment, and local townhall meetings.

Topics include the branches of government, lawmaking, the Constitution, state and local governments, and international relations. Activities emphasize Socratic discussion and the importance of civic participation.

Middle School Debate

Grades 7-9

This course is based on the Middle School Public Debate Program (<http://www.middleschooldebate.com>).

Students engage in debates which involve a wide variety of issues of public concern at the local, state, national, and global levels, as well as topics that are of direct relevance to students.

Mock Trial

Grades 7-9

Students take on courthouse roles such as attorneys, witnesses, and jurors in a mock trial presided over by an instructor-judge.

Students study and engage in trials, from jury selection, opening statements, examining witnesses, presenting evidence, closing arguments, and deliberating a verdict.

Classroom discussions address the role of courts in a democracy, the meaning of "due process," and the nature of justice. Students examine the differences between civil and criminal trials and the prosecution's burden of proving guilt beyond a reasonable doubt.

Model U.N.

Grades 7-9

Students assume the roles of ambassadors to the U.N. Security Council and work together to avert military confrontations and resolve international disputes. Students develop critical thinking, negotiating, public speaking, debating, and writing skills.

Topics include the United Nations, the U.N. Security Council, U.N. rules and procedures, speech-making, negotiating, caucusing, and drafting resolutions.

This course is based on the Peacekeeping Global Classrooms Curriculum published by the United Nations Association of the U.S.A. (<http://www.unausa.org>).



T.J. Exam Prep

Grades 7-8

Middle school students prepare for the math, verbal, and essay portions of the Thomas Jefferson High School Admissions Exam. Review materials include the official T.J. Exam study guide, commercial SHSAT preparation guides, and Fairfax Collegiate's own test review manual.

The math review includes algebra and geometry topics, word problems, and computation questions. The verbal review includes scrambled paragraph problems, logical reasoning questions, and reading comprehension exercises. The essay review includes strategies for writing effective essays under time pressure.

Each student receives an evaluation detailing areas for improvement.

Exam Essay Writing

Grades 7-9

This course helps students rapidly organize their thoughts and write effective essays under time pressure for exams that incorporate essay sections such as the T.J. Exam, the SSAT, and the SAT.

Topics include exam essay strategies, essay organization, essay scoring, grammar, usage, and style. Activities include writing short essays under simulated testing conditions, discussion and peer-review of student essays, grammar exercises, and practice on actual T.J., SSAT, and SAT writing exams.

Loudoun AOS Prep

Grades 7-9

Students learn about the Loudoun Academy of Science program and admissions. They also prepare for the PSAT (the standardized test required for AOS admission) and for the AOS timed writing sample.

This course uses *The Official SAT Study Guide* and covers all three sections of the PSAT. Students practice on actual PSAT tests under timed conditions.

PSAT/SAT Prep

Grades 7-9

Students prepare for the math, reading, and writing sections of the PSAT and SAT. The course text is *The Official SAT Study Guide*, published by the College Board.

The math review includes numbers and operations, algebra and functions, geometry and measurement, data analysis, statistics, and probability. The reading review emphasizes vocabulary, sentence completion, and reading comprehension questions. The writing review helps students write effective essays under time pressure.

Students complete one actual PSAT test and three actual SAT tests under timed conditions. They become familiar with question formats, test scoring, and time-management strategies.



"By the end, students are skilled at argument and rebuttal. I am amazed by their improvement."

Claire Cantrell

Public Speaking Instructor

ENGINEERING

Space Exploration

Grades 3-4

Students use computer simulations and hands-on projects to learn about astronomy and space exploration.

Computer simulations include space telescope and space shuttle simulators.

Projects include building refractor telescopes, constructing star maps, designing moon phase flipbooks, creating planetary models, and launching soda bottle rockets.

Intro to Engineering

Grades 3-4

Students explore engineering through hands-on activities focusing on the six classical simple machines: lever, wheel and axle, pulley, ramp, wedge, and screw.

Students also investigate the branches of engineering, practice the engineering design process, and learn about force, motion, and energy.

Construction Engineering

Grades 3-4

Using a variety of construction platforms, students complete building challenges and learn principles of engineering, architecture, and physics.

Students employ the “learn by doing” philosophy, using Lego blocks, Erector sets, K’Nex, unit blocks, and basic classroom supplies to fulfill challenge specifications through small-group design and trial-and-error.

Physics topics include material density, center of gravity, force diagrams, and geometry principles. Activities include weight and balance challenges, height competitions, and bridge design.

Siege Engines

Grades 5-6

Students explore history, physics, and engineering by designing and building models of medieval siege engines.

Students construct and operate classroom-safe miniature catapults, ballistae, onagers, trebuchets, and other ancient artillery engines. They learn the application of geometry, physics, and materials science in their design. For a final project, students work in groups to design and build siege engines and participate in launch-distance competitions.

Engineering topics include simple machines, tension, torque, two-dimensional kinematics, and the design process.

Civil Engineering

Grades 5-6

Students explore engineering concepts by building models of bridges, skyscrapers, roller coasters, and other architecture and construction projects. Projects are built from K’NEX model kits as well as from scratch. As a final project, students work in groups to design a structure that applies the concepts learned in the class.

Topics include static and dynamic force, Newton’s laws, energy, and motion physics. Activities include weight capacity competitions, roller coaster loop design, and other engineering challenges.

Prototyping and 3D Printing

Grades 5-6

Using a Makerbot 3D printer, students plan, design, fabricate, assemble, and refine solutions to real-world challenges and problems. Students learn to operate the Makerbot Replicator 2 and Digitizer, create a productive makerspace, and develop a tinkerer’s mindset.

Students undertake design challenges and iteratively plan, build, and test solutions to the problem. As a final project, students work in groups to create a prototype for a device of their own design.

Electronics

Grades 5-6

Elementary students learn about electricity and electronics using Snap Circuits (<http://www.snapcircuits.net>).

Topics include current, voltage, resistance, capacitance, Ohm’s Law, electromagnetism, solar cells, diodes, and binary logic.

Projects include simple, series, and parallel circuits, sound generators, logic circuits, burglar alarms, radios, lie detectors, oscillators, ammeters, voltmeters, relays, and LED display applications.

littleBits Electronics

Grades 5-6

Students use littleBits (<http://littlebits.cc>), an open source library of magnetic electronic modules, to design and build DIY gadgets. Using Arduino, students can then use simple programming to control their creations. Students learn basic electronic and prototyping concepts, and work through the design process before applying them to creative projects.

Topics include electronics, circuits, input/output sequences, and simple programming. Projects include a motion-sensing alarm, a robotic crane, a bike horn, a cardboard robot, and a light spectrometer.

Inventing and 3D Printing

Grades 7-9

Students learn to design and test their own inventions using 3D printing and other fabrication techniques. They operate the Makerbot Replicator 2 to 3D print objects of their own design, pitch their invention ideas to small groups, and iterate on design ideas.

Students also learn to use computer-assisted design software tools to create their invention blueprints. They generate models using the Makerbot Digitizer 3D scanner. For final projects, they print designs and create prototypes of their inventions to take home.

Arduino Electronics

Grades 7-9

Middle school students explore electronics, computers, and programming by building projects with Arduino, an open-source electronics prototyping platform (<http://www.arduino.cc>).

Projects include LED Dice, a binary counter, a Morse code translator, a lie detector, and a motion-sensing alarm.

Consistent with the Arduino philosophy of learning by tinkering and rapid prototyping, students also develop their own projects by interfacing “electronic junk” to Arduino circuit boards.

Raspberry Pi Projects

Grades 7-9

Students use Raspberry Pi computers to build embedded computing projects and explore computer hardware. This course combines computer engineering, electronics, and programming,

Students build their own homebrew arcade game cabinets, security cameras, and GPS trackers, and learn about input, output, processing, basic Python programming, and storage.

Biomedical Engineering

Grades 7-9

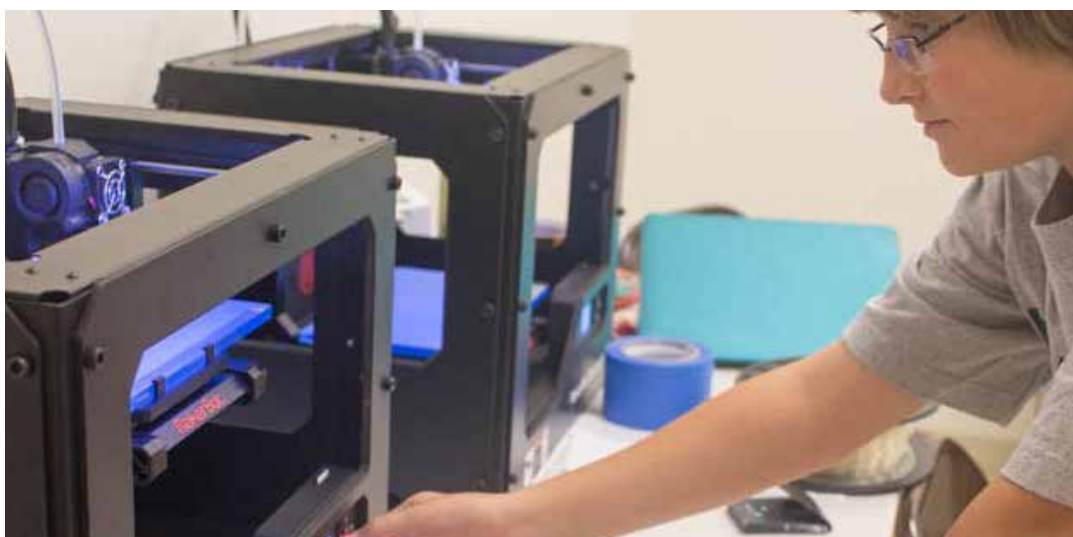
Students apply engineering principles to physiology and medicine, developing understanding through classroom demonstrations, discussions, and experiments. They also propose and prototype medical equipment, prostheses, and artificial organs using 3D printers, computer simulations, and traditional modeling materials.

Topics include basic concepts of biochemistry, cell physiology, cell cycles, cell division, DNA structure and synthesis, protein synthesis and gene expression, tissue structure, human anatomy, and genetic engineering.



“At Fairfax Collegiate we explore the past, present, and future of machines and technology.”

Nikitha Reghu
Engineering Instructor



ROBOTICS

Intro to Robotics

Grades 3-4

This course for younger students emphasizes robot assembly and simple programming.

Students construct stationary and mobile robots using the entire LEGO Mindstorms NXT component set.

There is an introduction to programming using the graphical NXT-G language.

Robotics Zoo

Grades 3-4

Robotics Zoo combines biology and robotics. Students model real and imaginary animals using LEGO Mindstorms NXT robots.

Students build robotic representations of spiders, frogs, elephants, and stegosaurus, and program robots using NXT-G to mimic characteristic animal behaviors.

For the final project, students imagine a new life form and build a robotic representation.

Robots in Space

Grades 3-4

Students learn about the use of robots in space travel, and build spaceships, rovers, and autonomous vehicles using LEGO Mindstorms NXT robotics kits.

Projects include MarsRoverBot, SpaceDiverBot, ShuttleBot, LunarBot, and SpaceMinerBot.

Construction Robots

Grades 3-4

This course integrates robotics, architecture, and construction engineering.

Students design, build, program, and operate LEGO Mindstorms NXT construction-themed robots including machine tools, HammerBot, ForkliftBot, and WreckingBallBot. Advanced students complete ambitious vehicle robots including BackhoeBot and BucketBot.

EV3 Robotics Olympiad

Grades 5-6

This course introduces students to competitive EV3 robotics.

EV3 Robotics Olympiad events include races, obstacle courses, mazes, weight lifting challenges, and robot soccer.

Working in pairs, students design, build, program, and “coach” LEGO Mindstorms EV3 robots for each event.

EV3 Mobile Robotics

Grades 5-6

Students assemble and program mobile LEGO Mindstorms EV3 robots.

Topics include motors, gear ratios, measurement, navigation, path planning, and obstacle avoidance. This course emphasizes EV3 programming.

EV3 Robots include Taskbot, DragRacerBot, REMBot, and MazeBot.

EV3 Robotics Engineering

Grades 5-6

Students use the EV3 Robotics platform to learn about the engineering process, project management, problem solving, and teamwork.

Projects include guided investigations and student-directed development. Students build a mining robot, a patrol robot, and a tree measurer robot.

Students keep engineering journals, and deliver project proposals, design reviews, and project solution demonstrations.

EV3 Robotics Platform

Grades 5-6

EV3 is LEGO’s latest robotics platform, which features new motors, sensors, remote controllers, and programming capabilities.

Students design, build, and program EV3 robots to respond to sight, sound, color, touch, infrared, and tilt sensors.

Projects include hill climbing, beacon retrieval, color sensor navigation, and robot combat.

EV3 Robotics Factory

Grades 5-6

Students complete engineering and design challenges using the EV3 robotics platform. Students collaborate to create stationary and mobile robots, tracking results in lab journals.

Programming topics include threading, sensor I/O, loops, switches, MyBlocks, and random number generation.

Projects include TriBot, automatic doors, a self-balancing robot, AntBot, and SNATCH3R, the robotic arm.

EV3 Robotics Combat

Grades 7-9

Students construct EV3 combat robots and battle in robotic gladiator tournaments.

Competitions include remote control and pure artificial intelligence contests.

Students use the LEGO EV3 programming language and conventional EV3 sensors, motors, and appendages. Advanced students learn LEGO EV3 RobotC programming and create custom sensors and battle attachments.

EV3 Robotic Vehicles

Grades 7-9

This course explores the new EV3 motors, sensors, remote controllers, and programming capabilities.

Students explore different methods of mobility utilizing wheels, treads, bipedal and tripod designs to learn about mechanical and digital transmissions, static equilibrium, gear ratios, and sensory feedback.

Students work through the *The Lego Mindstorms EV3 Laboratory* to build WatchGooz3, Rov3r, Sup3rcar, and Sentin31 robots.

VEX Robotics

Grades 7-9

The VEX Robotics Design System (www.vexrobotics.com) is the leading high school and college-level robotics platform.

Students work through the *VEX Inventor's Guide* and become familiar with key VEX subsystems: structure, motion, power, sensor, control, logic, and programming.

EV3 Competitive Robotics

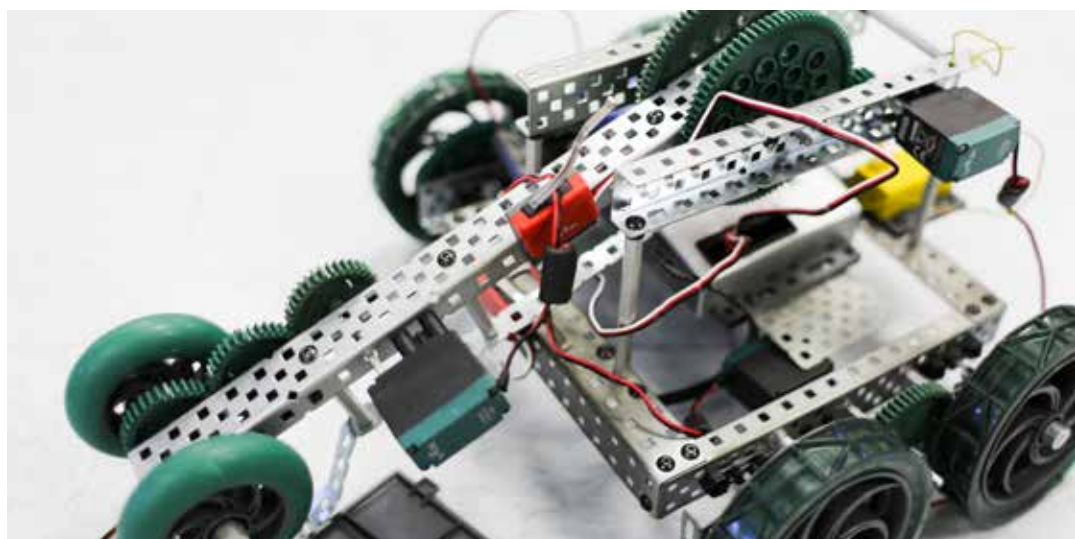
Grades 7-9

This course focuses on programming the new EV3 Intelligent Brick, which is orders of magnitude more powerful than the legacy NXT Intelligent Brick.

Students build and program EV3 robots to compete in complex challenges. Projects include Segway Bot, SoccerBot, SumoBot, and SniperBot.



"Robotics at Fairfax Collegiate is a challenging introduction to engineering and programming."
Elisa Ballschneider
Robotics Instructor



PROGRAMMING

Kodu Programming

Grades 3-4

Students create 3D games using Kodu, (<http://www.kodugamelab.com>), a visual programming language that emphasizes creativity, problem solving, and storytelling.

Students learn about Kodu worlds, landscapes, terrain, objects, characters, paths, behaviors, clones, interactions, strategies, pages, and camera angles.

Working alone or in pairs, students design games and optionally share them on the Planet Kodu website.

Scratch with WeDo

Grades 3-4

Scratch (<http://scratch.mit.edu>) provides a fun and engaging introduction to programming. Students snap graphical blocks together to create scripts that control media such as graphics, photos, and sound. Scratch software integrates with LEGO WeDo robotics hardware, allowing students to manipulate animations with physical sensor input.

Activities include playing with sample projects and creating original projects with the assistance of instructors.

Minecraft Modding

Grades 3-4

Using programming and design utilities, students create mods for the immensely popular computer game *Minecraft*. Students use MCreator (<http://mcreator.pylo.si/>) to design, build, and test their own custom mods.

Topics include using mods to create new blocks, items, creatures, environments, achievements, triggers, and events. As a final project, students design and code their own fully functional *Minecraft* mods, and export them to use at home with Minecraft Forge.

Python Programming

Grades 5-6

Students learn the foundations of programming and logical thinking by writing programs and simple games in Python. This primer is geared towards ambitious students with no previous coding experience.

Topics include variables, computer math, input and output, arrays, loops, graphics, and functions. Students will write a game and design its graphics as a final project.

Alice: Creating 3D Worlds

Grades 5-6

Alice (<http://www.alice.org>) is an object-oriented, 3D programming environment developed at Carnegie Mellon University. This class is an introduction to Alice and emphasizes creativity and technology.

Students use Alice to build 3D storybook worlds and to add and control advanced interactions and animations of 3D models, using basic conditional programming.

Topics include objects, events, logic, control structures, and orienting and moving 3D images.

GameMaker: Studio

Grades 5-6

Students learn object-oriented programming by designing, creating, and debugging games with *GameMaker: Studio* (<http://www.yoyogames.com>). Students create and script worlds, objects, graphics, and sounds.

Topics include objects, loops, variables, conditions, collision detection, scope, pathfinding, physics, and data structures.

Students create multi-platform games for their final projects.

Mobile Games

Grades 5-6

Students learn the fundamentals of programming as they create games for tablets and smartphones in the Stencyl programming environment.

Projects include platforming games, action games, battle games, and role-playing games. Students export games to PC and Android mobile devices.

Programming topics include variables, scripting, triggers, 2D graphics, actors and scenes, sound, and multiplatform compatibility.

Greenfoot Java

Grades 5-6

Students learn the basics of object-oriented programming and the Java programming language in Greenfoot, a student-friendly programming interface.

Topics include variables, computer math, control structures, classes, methods, inheritance, abstraction, and polymorphism. Activities include ecosystem simulations and simple games.

As final projects, students design, program, and publish their own games and simulations.

Game Programming

Grades 7-9

Students write games using BlitzPlus (<http://www.blitzbasic.com>).

Topics include variables, control structures, loops, functions, arrays, types, programming style, and graphics.

Students create, move, scale, and rotate images and shapes. Students work individually or in pairs and write a simple game as the final project.

Small Java

Grades 7-9

Small Java prepares students for Java-based high school computer science.

Topics include constants, types, variables, operators, expressions, the main() method, String objects, simple classes, member methods, conditions, loops, String manipulation, parameters, variable scope, console programs vs. GUI programs, and practice projects. The course uses the BlueJ IDE (<http://www.bluej.org>).

App Inventor

Grades 7-9

Students create apps and games for Android phones and tablets using MIT App Inventor (<http://appinventor.mit.edu/>).

Topics include running apps on Android, user interfaces, variables, control structures, I/O, importing libraries, and graphics.

Xbox 360 Development

Grades 7-9

Students write simple games for the Xbox and Windows using C#, Visual Studio Express, and XNA.

The first week introduces the core of the C# language and .NET Framework including variables, types, control structures, classes, objects, and collections.

The second week introduces 2D game development using the XNA Framework on the Xbox 360. Topics include 2D sprite graphics, game controller input, audio output, game engines, simple AI, and exporting to the Xbox 360.

3D Indie Games

Grades 7-9

Students design and program 3D games using the Unity 4 game engine, the premier game development tool for independent development studios. Students work individually and on teams to create games in multiple genres.

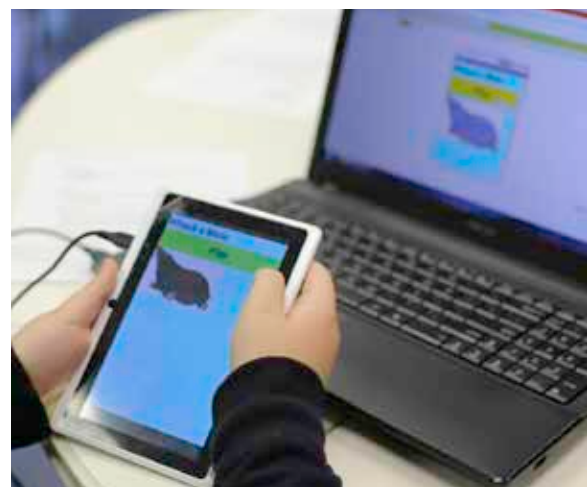
Topics include scripting with C#, graphics, object design, terrain creation, and level design. Students create their own graphics and sound and learn to use open-source libraries and assets.

As a final project, students design and create their own multi-platform games.



"Programming is an essential skill and a fun way to practice logical reasoning."

Danny Krulick
Programming Instructor



ART AND DESIGN

Drawing

Grades 3-4 & Grades 5-6

This is a course for beginners and teaches drawing as a foundation for all forms of visual expression.

Topics include sketches, shapes, angles, perspective, horizon, vanishing points, reflections, contrast, shadows, light effects, and composition.

Exercises include still life drawings, portraits, landscapes, and cartoons.

Materials are provided and include specialized pencils, sketch pads, drawing boards, and drawing tools.

Painting

Grades 3-4 & Grades 5-6

This course introduces both tempera and watercolor painting.

Activities include structural drawings, value sketches, one-color paintings, three-color paintings, and tempera paintings.

Materials are provided and include student-grade paints, brushes, palettes, a variety of paper, and assorted tools.

Digital Design

Grades 3-4

Students explore universal design principles by creating digital art in a variety of media.

Design topics include composition, exposure, colors, contrast, and vector and raster images.

Activities include digital photography, image editing, digital illustration, digital music creation, and game design exercises.

For a final project, students customize *Minecraft*, a popular computer game, with their own original digital art.

Graphic Design

Grades 5-6

Students learn how to execute sophisticated single-page design projects using universal design principles, layout pads, and Adobe Photoshop Elements.

Design topics include space, grouping, alignment, emphasis, grids, color theory, typography, and digital images.

Projects include store signs, menus, banners, posters, and advertisements.

Architectural Design

Grades 5-6

Students learn about architecture and about Google SketchUp, a free digital drafting software package.

Architecture topics include the history of residential architecture, international housing styles, and form and function in residential design.

Students practice 2D drafting and 3D modeling. As a final project, each student creates and presents his or her "dream house" using Google SketchUp.

HTML5 Web Pages

Grades 5-6

Students learn HTML5 and create their own web pages.

Topics include the structure of a web page, HTML tags, HTML attributes, hyperlinks, CSS styles, and HTML5 elements and attributes.

Students use digital cameras, Paint.NET, and GIMP to create images for the web.

As a final project, each student creates and publishes a small website.

Photography

Grades 5-6 & Grades 7-9

Students learn digital SLR photography starting with basic camera operation.

Subjects include plants and flowers, food, portraits, products, sports and action, and architecture.

Exercises emphasize exposure, composition, color, and lighting. Students achieve artistic effects by manually controlling the components of exposure: aperture, shutter speed, and ISO.

The Summer Program provides Canon EOS DSLR cameras for students to use.

HTML5 Web Design

Grades 7-9

Students learn basic web design principles and write and style web pages using HTML5, CSS styles, and stylesheets.

Design topics include alignment, proximity, repetition, contrast, fonts, images, white space, navigation, and usability.

Students learn to style HTML tags with style attributes and from a stylesheet. They also experiment with the new HTML5 elements and attributes.

Students author pages using open source tools: Notepad++, GIMP, and InkScape.

For a final project, each student creates and publishes a small website.

Game Design & Modding

Grades 7-9

Students “mod” (customize) commercial video games with their own graphics, sounds, unit definitions, maps, and scripts.

The first week students mod the strategy game *Civilization IV* by inventing new units and technologies, and by altering combat rules and map generation logic.

The second week, students create modules for the 3D physics sandbox *Garry's Mod*, designing objects, levels, environments, obstacle courses, and minigames.

Role-Playing Game Design

Grades 7-9

Students design their own role-playing games using RPG Maker VX Ace.

Instruction emphasizes crafting visual, audio, and storytelling components to create compelling adventures.

Topics include scripting, data management, game balancing, storytelling, graphic design, sprites and tilesets, and the design process. Students share and publish their projects.

Songwriting

Grades 5-6 & Grades 7-9

Students compose, arrange, and record original pop and rock music using out-board gear, Garage Band, Ableton Live, and Reason. No prior musical experience is required.

Composition topics include composing rhythm and bass patterns, using keyboard sounds, creating guitar tones, and writing melodic hooks.

As a final project, students will record a collection of songs.



“Our design courses help well-rounded students develop artistic and analytical skills.”

Fatima Pineda
Art and Design Instructor



FILMMAKING

Filmmaking

Grades 3-4 & Grades 5-6

Students learn how to plan, write, shoot, edit and complete post-production for digital video short films.

With the guidance of instructors, students brainstorm ideas for a short film, write an original script, and create a shot list and storyboard.

Students shoot their film using a tripod, a Panasonic DVX-100B video camera, a boom microphone, and (optionally) a lighting kit.

Students edit their film using iMovie, add music and credits, complete post-production, and export the film to a private Vimeo account for home viewing.



Stop-Motion Animation

Grades 3-4 & Grades 5-6

Students use still cameras, audio recorders, and iMovie to create stop-motion animation films. These can be narrative (scripted) or experimental videos created from LEGO blocks, modeling clay, action figures, and other “found objects”.

This introductory course covers the basics of using household objects and miniature construction to create a compelling story. The course provides an overview of photography, sound recording, and video editing as part of the filmmaking process.

Digital Animation

Grades 5-6

This course teaches basic animation techniques using Blender animation software.

Students model objects and characters using ‘Nurbs’ rig characters for movement, light scenes, apply textures and colors to models, and animate models.

Final projects include animated 3D characters and 3D environments.

Video Production

Grades 7-9

Students shoot and complete rough edits of films based on scripts from the scriptwriting classes and other sources.

The class begins with readings and exercises that cover working with actors, script analysis, storyboarding and shot listing, location scouting, camera operation, lighting, and sound technique.

The majority of the course is devoted to group production of a short DV film.

Students export rough edits to private Vimeo accounts for home viewing.

Web Video

Grades 7-9

Students plan, write, edit, and share a variety of genres of web video including parodies, advertorials, product reviews, vlogs, and tutorials.

Production concepts include location scouting, interviewing, B-roll footage, green screen effects, incorporating digital images and screenshots, and multi-cam setups.

Production equipment includes mirrorless and DSLR cameras, simple lighting kits and on-camera lights, audio recorders, and stick, shotgun, and lavalier microphones. Students use Adobe Premiere Elements to edit and optionally upload videos to personal Vimeo, YouTube, Facebook, and Twitter accounts.

BOOSTER WEEK: ONE WEEK COURSES

Get ready for upcoming academic challenges with Booster Week, Fairfax Collegiate's focused, one-week summer prep courses. Instruction emphasizes individualized practice, and students receive detailed feedback from instructors. Parents receive diagnostic reports tracking students' strengths, areas for improvement, and progress.

This year there are six locations with Booster Week courses: Fairfax, Falls Church, Herndon, McLean, Leesburg, and South Reston. Please visit <http://www.BoosterWeek.com> for class schedules and course syllabi.

2015 Booster Weeks

Week 1 (7/20-7/24) - South Reston	
Week 2 (7/27-7/31) - South Reston	
Week 3 (8/3-8/7) - South Reston, Falls Church	
Week 4 (8/10-8/14) - South Reston, Falls Church	
Week 5 (8/17-8/21) - South Reston, Fairfax, Herndon, Falls Church, Leesburg	
Week 6 (8/24-8/28) - Falls Church	
Week 7 (8/31-9/4) - Falls Church, McLean	

Program Fees

Half Day	\$245 per week
Full Day	\$395 per week

Booster Week Math

Basic Math Booster 3-4

Place Value, Addition and Subtraction, Multiplication, Division, Fractions, Decimals, Measurement, Word Problems.

Math Booster 3-4

Place Value and Rounding, Addition and Subtraction, Multiplication and Division, Measurement, Fractions, Geometry, Probability, Graphs and Patterns, Word Problems.

Math Booster 5-6

Arithmetic, Fractions, Decimals, Factoring, Geometry, Measurement, Probability, Statistics, Pre-Algebra.

Pre-Algebra Booster 6-8

Negative Numbers, Variables, Terms, Expressions, Solving Equations, Factoring, Rational Numbers, Ratios and Percents, Graphing, Squares and Square Roots.

Algebra Booster 7-9

Computation, Variables, Terms, Expressions, Solving Equations, Polynomials, Rational Numbers, Fractions, Graphing, Systems of Equations, Square Roots, Word Problems.

Geometry Booster 7-9

Definitions, Angles, Congruence and Similarity, Pythagorean Theorem, Coordinate Plane, Perimeter and Area, Quadrilaterals, Polygons, Circles.

Booster Week Writing

Basic Writing Booster 3-4

Word Choice, Spelling, Grammar, Writing Tense, Pronoun Agreement, Paragraphs.

Writing Booster 3-4

Subject-Verb Agreement, Revision, Persuasive Writing, Conjunctions, Poetry, Peer Review, Mysteries, Misused Words, Paragraphs.

Reading Booster 3-4

Main Idea and Details, Context Clues, Recall and Restatement, Interpretation of Viewpoint, Literary Devices.

Basic Writing Booster 5-6

Grammar, Paragraph Structure, Main Topics, Supporting Details, Tone, Essay Structure.

Writing Booster 5-6

Paragraph Structure, Essay Structure, Peer Review, Imagery, Free Writing.

Reading Booster 5-6

Reading Comprehension, Character Motivation, Themes, Motifs, Plot.

Writing Booster 7-9

Mechanics, Personal Narratives, Peer Review, Dialogue, Setting, Character, Story Writing, Poetry, Plays.

Booster Week Test Prep

T.J. Math Booster 6-8

Basic Concepts and Arithmetic, Algebra, Word Problems, Geometry, Graphing and Charts, Problem Solving Strategies, Test Structure and Format, T.J. Exam Scoring and Admissions.

T.J. Verbal Booster 6-8

Verbal Section Overview, Scrambled Paragraphs, Logical Reasoning, Critical Reading, Reading Comprehension, Time Management, Test Structure and Format, T.J. Exam Scoring and Admissions.

Exam Essay Booster 7-9

Grammar, Usage, Style, Essay Structure, Essay Planning and Revision, Types of Essays, Strategies for Timed Essays, Exam Essay Rubrics.

PSAT-SAT Verbal Booster 7-9

Verbal Section Overview, Sentence Completion, Critical Reading, Sentence Errors, Improving Paragraphs, Verbal Test-Taking Strategies, Test Structure and Format, Test Scoring and Rubric.

PSAT-SAT Math Booster 7-9

Numbers and Operations, Algebra and Functions, Geometry and Functions, Geometry and Measurement, Data Analysis, Statistics, and Probability, Test Structure and Format, Strategies for Mathematics Questions, Test Scoring and Rubric.

ALEXANDRIA AND FALLS CHURCH SCHEDULES

Alexandria^{D+}

Beth El Hebrew Congregation, 3830 Seminary Rd., Alexandria, VA 22304

Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14	Session V Aug 17-Aug 28
Morning	Morning	Morning	Morning
Writing Fundamentals 3-4 Spy Science 3-4 Digital Design 3-4 Brain Games 5-6 EV3 Robotics Platform 5-6 Digital Animation 5-6 Grammar, Usage, & Style 7-9 Small Java 7-9	Fairfax Collegiate Math 3-4 Stop-Motion Animation 3-4 Writing Skills & Grammar 5-6 EV3 Robotics Engineering 5-6 GameMaker: Studio 5-6 Intro to Geometry 7-9 Newtonian Physics 7-9 HTML5 Web Design 7-9	Illustrated Stories 3-4 Robots in Space 3-4 Cryptography 5-6 Mobile Games 5-6 Filmmaking 5-6 Intro to Algebra 7-9 Middle School Debate 7-9 Forensic Science 7-9	Math Fundamentals 3-4 Public Speaking 3-4 Kodu Programming 3-4 Writing Skills & Grammar 5-6 EV3 Robotics Olympiad 5-6 Intro to Pre-Algebra 6-8 Model U.N. 7-9 Small Java 7-9
Afternoon	Afternoon	Afternoon	Afternoon
Thinking Skills 3-4 Construction Robots 3-4 Creative Writing 5-6 Speech 5-6 Alice: 3D Worlds 5-6 Intro to Algebra 7-9 Genetics 7-9 Role-Playing Game Design 7-9	Reading Reinforcement 3-4 Public Speaking 3-4 Fairfax Collegiate Math 5-6 HTML5 Web Pages 5-6 Stop-Motion Animation 5-6 Writers' Workshop 7-9 EV3 Robotics Combat 7-9 T.J. Exam Prep 7-8	Word Problems 3-4 Minecraft Modding 3-4 Reading Newbery Winners 5-6 EV3 Mobile Robotics 5-6 Forensic Science 5-6 Satire and Parody 7-9 App Inventor 7-9 Video Production 7-9	Reading Reinforcement 3-4 Intro to Robotics 3-4 Fairfax Collegiate Math 5-6 Elementary Debate 5-6 Alice: 3D Worlds 5-6 Reading for Meaning 7-9 EV3 Competitive Robotics 7-9 T.J. Exam Prep 7-8

Falls Church

St. Katherine Greek Orthodox Church, 3149 Glen Carlyn Rd., Falls Church, VA 22041

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31
Morning	Morning	Morning
Writing Fundamentals 3-4 Science Olympiad 3-4 Fairfax Collegiate Math 5-6 EV3 Robotics Factory 5-6 Songwriting 5-6 Writers' Workshop 7-9 VEX Robotics 7-9 T.J. Exam Prep 7-8	Writing and Revising 3-4 Robots in Space 3-4 Problem Solving 5-6 Forensic Science 5-6 HTML5 Web Pages 5-6 Dystopian Futures 7-9 PSAT/SAT Prep 7-9 Raspberry Pi Projects 7-9	Writing Fundamentals 3-4 Persuasive Speaking 3-4 Brain Games 5-6 EV3 Mobile Robotics 5-6 Optics 5-6 Reading for Meaning 7-9 T.J. Exam Prep 7-8 Photography 7-9
Afternoon	Afternoon	Afternoon
Thinking Skills 3-4 Intro to Robotics 3-4 Writing Skills & Grammar 5-6 Science Olympiad 5-6 Architectural Design 5-6 Intro to Geometry 7-9 Game Design & Modding 7-9 Songwriting 7-9	Fairfax Collegiate Math 3-4 Kodu Programming 3-4 Strategic Reading 5-6 Elementary Debate 5-6 EV3 Robotics Olympiad 5-6 Intro to Pre-Algebra 6-8 3D Indie Games 7-9 Forensic Science 7-9	Word Problems 3-4 Construction Engineering 3-4 Creative Writing 5-6 Speech 5-6 Photography 5-6 Intro to Algebra 7-9 Lasers 7-9 Exam Essay Writing 7-9

Falls Church Booster Week Classes Aug 17-Sep 4: Please visit www.FairfaxCollegiate.com/Falls-Church

MCLEAN AND VIENNA SCHEDULES

McLean

Redeemer Lutheran Church, 1545 Chain Bridge Rd., McLean, VA 22101

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14	Session V Aug 17-Aug 28
Morning	Morning	Morning	Morning	Morning
The Writing Process 5-6 Speech 5-6 GameMaker: Studio 5-6 Prototyping & 3D Printing 5-6 Intro to Pre-Algebra 6-8 App Inventor 7-9 Lasers 7-9 T.J. Exam Prep 7-8	Word Problems 5-6 EV3 Robotics Engineering 5-6 Human Biology & Anatomy 5-6 Songwriting 5-6 Writers' Workshop 7-9 T.J. Exam Prep 7-8 Game Design & Modding 7-9 Arduino Electronics 7-9	Fairfax Collegiate Math 5-6 EV3 Robotics Platform 5-6 Alice: 3D Worlds 5-6 Filmmaking 5-6 Reading for Meaning 7-9 Middle School Debate 7-9 Xbox 360 Development 7-9 Exam Essay Writing 7-9	Word Problems 5-6 Speech 5-6 Electronics 5-6 Siege Engines 5-6 Grammar, Usage, & Style 7-9 3D Indie Games 7-9 Photography 7-9 Web Video 7-9	Fairfax Collegiate Math 5-6 Elementary Debate 5-6 EV3 Robotics Factory 5-6 Mobile Games 5-6 Dystopian Futures 7-9 Forensic Science 7-9 Game Design & Modding 7-9 Arduino Electronics 7-9
Afternoon	Afternoon	Afternoon	Afternoon	Afternoon
Problem Solving 5-6 Mobile Games 5-6 Optics 5-6 Siege Engines 5-6 Middle School Debate 7-9 EV3 Robotic Vehicles 7-9 Exam Essay Writing 7-9 Inventing and 3D Printing 7-9	Creative Writing 5-6 Elementary Debate 5-6 EV3 Robotics Factory 5-6 Arduino 5-6 Contest Math 7-9 Game Programming 7-9 Neuroscience 7-9 Songwriting 7-9	Writing Skills & Grammar 5-6 Model Government 5-6 HTML5 Web Pages 5-6 Civil Engineering 5-6 Intro to Geometry 7-9 PSAT/SAT Prep 7-9 Role-Playing Game Design 7-9 Video Production 7-9	The Writing Process 5-6 EV3 Robotics Engineering 5-6 GameMaker: Studio 5-6 Photography 5-6 Intro to Pre-Algebra 6-8 Model U.N. 7-9 VEX Robotics 7-9 T.J. Exam Prep 7-8	Strategic Reading 5-6 Forensic Science 5-6 Architectural Design 5-6 Digital Animation 5-6 Intro to Algebra 7-9 Mock Trial 7-9 App Inventor 7-9 Newtonian Physics 7-9

McLean Booster Week Classes Aug 31-Sep 4: Please visit www.FairfaxCollegiate.com/McLean

Vienna

Green Hedges School, 415 Windover Ave. NW, Vienna, VA 22180

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14
Morning	Morning	Morning	Morning
Illustrated Stories 3-4 Public Speaking 3-4 Drawing 3-4 Stop-Motion Animation 3-4 Fairfax Collegiate Math 5-6 EV3 Robotics Engineering 5-6 Python Programming 5-6 Civil Engineering 5-6	Reading Reinforcement 3-4 Persuasive Speaking 3-4 Construction Robots 3-4 Scratch Programming 3-4 Cryptography 5-6 EV3 Robotics Olympiad 5-6 Science Olympiad 5-6 HTML5 Web Pages 5-6	Fairfax Collegiate Math 3-4 Public Speaking 3-4 Chemistry Concepts 3-4 Intro to Engineering 3-4 Strategic Reading 5-6 Greenfoot Java 5-6 Human Biology & Anatomy 5-6 Architectural Design 5-6	Writing and Revising 3-4 Intro to Robotics 3-4 Construction Engineering 3-4 Brain Games 5-6 Alice: Creating 3-D Worlds 5-6 Filmmaking 5-6
Afternoon	Afternoon	Afternoon	Afternoon
Fairfax Collegiate Math 3-4 Robots in Space 3-4 Spy Science 3-4 Space Exploration 3-4 Writing Skills & Grammar 5-6 Elementary Debate 5-6 Drawing 5-6 Stop-Motion Animation 5-6	Word Problems 3-4 Intro to Robotics 3-4 Kodu Programming 3-4 Science Olympiad 3-4 The Writing Process 5-6 Speech 5-6 EV3 Robotics Platform 5-6 GameMaker: Studio 5-6	Writing Fundamentals 3-4 Robotics Zoo 3-4 Minecraft Modding 3-4 Dinosaurs 3-4 Word Problems 5-6 Elementary Debate 5-6 EV3 Mobile Robotics 5-6 Siege Engines 5-6	Math Fundamentals 3-4 Digital Design 3-4 Filmmaking 3-4 Writing Skills and Grammar 5-6 EV3 Robotics Platform 5-6 Arduino 5-6

^oDietary Restrictions at this facility. Please do not bring meat or shell fish. Lunches may include dairy products and tuna fish. Questions? Please call 703 481-3080.

[†]Indoor break location. The supervised twenty-minute morning and afternoon breaks are indoors at these facilities.

FAIRFAX AND CHANTILLY SCHEDULES

Fairfax^D

Gesher Jewish Day School, 4800 Mattie Moore Ct., Fairfax, VA 22030

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14
Morning	Morning	Morning	Morning
Illustrated Stories 3-4 Filmmaking 3-4 Intro to Engineering 3-4 Word Problems 5-6 EV3 Mobile Robotics 5-6 GameMaker: Studio 5-6 Satire and Parody 7-9 Mock Trial 7-9 Xbox 360 Development 7-9	Persuasive Speaking 3-4 Minecraft Modding 3-4 Chemistry Concepts 3-4 Brain Games 5-6 Mobile Games 5-6 Electronics 5-6 Writers' Workshop 7-9 T.J. Exam Prep 7-8 Web Video 7-9	Writing Fundamentals 3-4 Spy Science 3-4 Drawing 3-4 Fairfax Collegiate Math 5-6 EV3 Robotics Factory 5-6 GameMaker: Studio 5-6 Grammar, Usage, & Style 7-9 EV3 Robotic Vehicles 7-9 Inventing and 3D Printing 7-9	Fairfax Collegiate Math 3-4 Construction Robots 3-4 Painting 3-4 Creative Writing 5-6 Elementary Debate 5-6 Stop-Motion Animation 5-6 Epic Fantasy 7-9 Game Programming 7-9 T.J. Exam Prep 7-8
Afternoon	Afternoon	Afternoon	Afternoon
Fairfax Collegiate Math 3-4 Construction Robots 3-4 Scratch Programming 3-4 Strategic Reading 5-6 EV3 Robotics Olympiad 5-6 Filmmaking 5-6 Intro to Algebra 7-9 Neuroscience 7-9 PSAT/SAT Prep 7-9	Math Fundamentals 3-4 Robotics Zoo 3-4 Space Exploration 3-4 Writing Skills & Grammar 5-6 Architectural Design 5-6 Civil Engineering 5-6 Intro to Pre-Algebra 6-8 App Inventor 7-9 Exam Essay Writing 7-9	Word Problems 3-4 Public Speaking 3-4 Robots in Space 3-4 Short Story Writing 5-6 Drawing 5-6 Prototyping & 3D Printing 5-6 Intro to Geometry 7-9 Small Java 7-9 Biomedical Engineering 7-9	Writing and Revising 3-4 Stop-Motion Animation 3-4 Construction Engineering 3-4 Problem Solving 5-6 EV3 Mobile Robotics 5-6 Painting 5-6 Middle School Debate 7-9 Exam Essay Writing 7-9 Raspberry Pi Projects 7-9

Fairfax Booster Week Classes Aug 17-Aug 21: Please visit www.FairfaxCollegiate.com/Fairfax

Chantilly

St. Timothy Catholic School, 13809 Poplar Tree Rd., Chantilly, VA, 20151

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14
Morning	Morning	Morning	Morning
Reading Reinforcement 3-4 Minecraft Modding 3-4 Chemistry Concepts 3-4 Cryptography 5-6 Speech 5-6 Arduino 5-6 Exam Essay Writing 7-9 Photography 7-9 Raspberry Pi Projects 7-9	Fairfax Collegiate Math 3-4 Public Speaking 3-4 Dinosaurs 3-4 The Writing Process 5-6 EV3 Robotics Engineering 5-6 Siege Engines 5-6 Intro to Algebra 7-9 Game Programming 7-9 Lasers 7-9	Thinking Skills 3-4 Construction Robots 3-4 Construction Engineering 3-4 Creative Writing 5-6 EV3 Robotics Olympiad 5-6 Graphic Design 5-6 Intro to Pre-Algebra 6-8 Middle School Debate 7-9 3D Indie Games 7-9	Writing Fundamentals 3-4 Drawing 3-4 Space Exploration 3-4 Fairfax Collegiate Math 5-6 EV3 Robotics Engineering 5-6 Forensic Science 5-6 Filmmaking 5-6 Writers' Workshop 7-9 EV3 Robotics Combat 7-9 Small Java 7-9 T.J. Exam Prep 7-8
Afternoon	Afternoon	Afternoon	Afternoon
Word Problems 3-4 Persuasive Speaking 3-4 Robotics Zoo 3-4 Writing Skills and Grammar 5-6 EV3 Robotics Platform 5-6 Photography 5-6 Intro to Geometry 7-9 Genetics 7-9 T.J. Exam Prep 7-8	Writing Fundamentals 3-4 Intro to Robotics 3-4 Intro to Engineering 3-4 Fairfax Collegiate Math 5-6 Alice: Creating 3-D Worlds 5-6 Optics 5-6 Reading for Meaning 7-9 Mock Trial 7-9 Game Design & Modding 7-9	Illustrated Stories 3-4 Kodu Programming 3-4 Digital Design 3-4 Brain Games 5-6 Speech 5-6 Greenfoot Java 5-6 Satire and Parody 7-9 VEX Robotics 7-9 Neuroscience 7-9	Fairfax Collegiate Math 3-4 Intro to Robotics 3-4 Filmmaking 3-4 Writing Skills and Grammar 5-6 Python Programming 5-6 Drawing 5-6 Civil Engineering 5-6 Intro to Algebra 7-9 Forensic Science 7-9 Exam Essay Writing 7-9 Role-Playing Game Design 7-9

RESTON AND DULLES SCHEDULES

Reston^{D†}

Northern Virginia Hebrew Congregation, 1441 Wiehle Ave., Reston, VA 20190

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14	Session V Aug 17-Aug 28
Morning	Morning	Morning	Morning	Morning
Fairfax Collegiate Math 3-4 Public Speaking 3-4 Filmmaking 3-4 The Writing Process 5-6 EV3 Robotics Engineering 5-6 Painting 5-6 Intro to Algebra 7-9 T.J. Exam Prep 7-8 Game Design & Modding 7-9	Math Fundamentals 3-4 Construction Robots 3-4 Kodu Programming 3-4 Writing Skills & Grammar 5-6 EV3 Robotics Olympiad 5-6 Civil Engineering 5-6 Intro to Geometry 7-9 T.J. Exam Prep 7-8 Arduino Electronics 7-9	Fairfax Collegiate Math 3-4 Robotics Zoo 3-4 Chemistry Concepts 3-4 Reading Newbery Winners 5-6 HTML5 Web Pages 5-6 Filmmaking 5-6 Intro to Pre-Algebra 6-8 PSAT/SAT Prep 7-9 Raspberry Pi Projects 7-9	Word Problems 3-4 Persuasive Speaking 3-4 Scratch Programming 3-4 Strategic Reading 5-6 Speech 5-6 Science Olympiad 5-6 Intro to Algebra 7-9 EV3 Competitive Robotics 7-9 Exam Essay Writing 7-9	Writing Fundamentals 3-4 Minecraft Madding 3-4 Intro to Engineering 3-4 Fairfax Collegiate Math 5-6 EV3 Mobile Robotics 5-6 Human Biology & Anatomy 5-6 Writers' Workshop 7-9 Middle School Debate 7-9 T.J. Exam Prep 7-8
Afternoon	Afternoon	Afternoon	Afternoon	Afternoon
Writing and Revising 3-4 Intro to Robotics 3-4 Painting 3-4 Fairfax Collegiate Math 5-6 Model Government 5-6 Alice: Creating 3-D Worlds 5-6 Reading for Meaning 7-9 Exam Essay Booster 7-9 Video Production 7-9	Writing Fundamentals 3-4 Robots in Space 3-4 Construction Engineering 3-4 Problem Solving 5-6 Python Programming 5-6 Arduino 5-6 EV3 Robotic Vehicles 7-9 Small Java 7-9 Exam Essay Writing 7-9	Illustrated Stories 3-4 Digital Design 3-4 Filmmaking 3-4 Word Problems 5-6 EV3 Robotics Engineering 5-6 Electronics 5-6 Writers' Workshop 7-9 Mock Trial 7-9 HTML5 Web Design 7-9	Reading Reinforcement 3-4 Construction Robots 3-4 Science Olympiad 3-4 Cryptography 5-6 EV3 Robotics Platform 5-6 Greenfoot Java 5-6 Dystopian Futures 7-9 Game Programming 7-9 Lasers 7-9	Thinking Skills 3-4 Robotics Zoo 3-4 Spy Science 3-4 Writing Skills & Grammar 5-6 GameMaker: Studio 5-6 Graphic Design 5-6 Intro to Geometry 7-9 EV3 Robotics Combat 7-9 Exam Essay Writing 7-9

South Reston (Al Fatih Academy) Booster Week Classes Jul 20-Aug 21: Please visit www.FairfaxCollegiate.com/South-Reston

Dulles

St. Veronica Catholic School, 3460-B Centreville Rd., Chantilly, VA 20151

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31
Morning	Morning	Morning
Writing and Revising 3-4 Public Speaking 3-4 Construction Robots 3-4 Problem Solving 5-6 Architectural Design 5-6 Electronics 5-6 Reading for Meaning 7-9 Small Java 7-9 Arduino Electronics 7-9	Reading Reinforcement 3-4 Persuasive Speaking 3-4 Robotics Zoo 3-4 Word Problems 5-6 Human Biology & Anatomy 5-6 Filmmaking 5-6 Writers' Workshop 7-9 App Inventor 7-9 T.J. Exam Prep 7-8	Writing Fundamentals 3-4 Robots in Space 3-4 Painting 3-4 Fairfax Collegiate Math 5-6 Elementary Debate 5-6 Songwriting 5-6 Epic Fantasy 7-9 EV3 Competitive Robotics 7-9 Genetics 7-9
Afternoon	Afternoon	Afternoon
Thinking Skills 3-4 Kodu Programming 3-4 Space Exploration 3-4 Strategic Reading 5-6 Elementary Debate 5-6 Alice: 3D Worlds 5-6 Intro to Pre-Algebra 6-8 Model U.N. 7-9 EV3 Robotics Combat 7-9	Word Problems 3-4 Spy Science 3-4 Filmmaking 3-4 Writing Skills and Grammar 5-6 EV3 Mobile Robotics 5-6 GameMaker: Studio 5-6 Intro to Geometry 7-9 Middle School Debate 7-9 HTML5 Web Design 7-9	Math Fundamentals 3-4 Public Speaking 3-4 Scratch Programming 3-4 The Writing Process 5-6 EV3 Robotics Platform 5-6 Painting 5-6 Contest Math 7-9 Game Programming 7-9 Songwriting 7-9

^DDietary Restrictions at this facility. Please do not bring meat or shell fish. Lunches may include dairy products and tuna fish. Questions? Please call 703 481-3080.

[†]Indoor break location. The supervised twenty-minute morning and afternoon breaks are indoors at these facilities.

ASHBURN, LEESBURG AND HERNDON SCHEDULES

Ashburn†

Loudoun School for the Gifted, 44675 Cape Ct., Ashburn, VA 20147

Session I Jun 22-Jul 3	Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14	Session V Aug 17-Aug 28
Morning Writing Fundamentals 3-4 Kodu Programming 3-4 EV3 Robotics Olympiad 5-6 Forensic Science 5-6 3D Indie Games 7-9 Loudoun AOS Prep 7-9	Morning Writing & Revising 3-4 Intro to Robotics 3-4 Fairfax Collegiate Math 5-6 Alice: Creating 3-D Worlds 5-6 Epic Fantasy 7-9 VEX Robotics 7-9	Morning Math Fundamentals 3-4 Intro to Engineering 3-4 Reading Newbery Winners 5-6 Architectural Design 5-6 Intro to Geometry 7-9 Exam Essay Writing 7-9	Morning Reading Reinforcement 3-4 Robotics Zoo 3-4 Fairfax Collegiate Math 5-6 Siege Engines 5-6 Writers' Workshop 7-9 EV3 Robotic Vehicles 7-9	Morning Fairfax Collegiate Math 3-4 Persuasive Speaking 3-4 The Writing Process 5-6 EV3 Robotics Engineering 5-6 Small Java 7-9 Forensic Science 7-9
Afternoon Fairfax Collegiate Math 3-4 Robotics Zoo 3-4 The Writing Process 5-6 Greenfoot Java 5-6 Middle School Debate 7-9 Forensic Science 7-9	Afternoon Word Problems 3-4 Construction Robots 3-4 Writing Skills and Grammar 5-6 EV3 Mobile Robotics 5-6 Intro to Algebra 7-9 Xbox 360 Development 7-9	Afternoon Writing Fundamentals 3-4 Robots in Space 3-4 Elementary Debate 5-6 GameMaker: Studio 5-6 Genetics 7-9 T.J. Exam Prep 7-8	Afternoon Thinking Skills 3-4 Chemistry Concepts 3-4 Writing Skills and Grammar 5-6 EV3 Robotics Factory 5-6 Intro to Algebra 7-9 HTML5 Web Design 7-9	Afternoon Illustrated Stories 3-4 Robots in Space 3-4 Word Problems 5-6 Forensic Science 5-6 Middle School Debate 7-9 Loudoun AOS Prep 7-9

Leesburg

Loudoun Country Day School, 20600 Red Cedar Dr., Leesburg, VA 20175

Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14
Morning Thinking Skills 3-4 Scratch Programming 3-4 Reading Newbery Winners 5-6 Filmmaking 5-6 Writers' Workshop 7-9 EV3 Robotics Combat 7-9	Morning Reading Reinforcement 3-4 Stop-Motion Animation 3-4 Problem Solving 5-6 Graphic Design 5-6 Intro to Algebra 7-9 Game Programming 7-9	Morning Math Fundamentals 3-4 Intro to Engineering 3-4 Creative Writing 5-6 EV3 Robotics Olympiad 5-6 Prototyping and 3D Printing 5-6 Intro to Geometry 7-9 Biomedical Engineering 7-9
Afternoon Writing Fundamentals 3-4 Filmmaking 3-4 Word Problems 5-6 EV3 Robotics Platform 5-6 Intro to Geometry 7-9 Middle School Debate 7-9	Afternoon Fairfax Collegiate Math 3-4 Robotics Zoo 3-4 The Writing Process 5-6 Stop-Motion Animation 5-6 Grammar, Usage, & Style 7-9 Game Design & Modding 7-9	Afternoon Writing Fundamentals 3-4 Robots in Space 3-4 Fairfax Collegiate Math 5-6 Civil Engineering 5-6 Loudoun AOS Prep 7-9 Inventing and 3D Printing 7-9

Leesburg Booster Week Classes Aug 17-Aug 21: Please visit www.FairfaxCollegiate.com/Leesburg

Herndon

St. Joseph Parish Hall, 750 Peachtree St., Herndon, VA 20170

Session II Jul 6-Jul 17	Session III Jul 20-Jul 31	Session IV Aug 3-Aug 14
Morning Short Story Writing 5-6 Elementary Debate 5-6 Greenfoot Java 5-6 Prototyping & 3D Printing 5-6 Intro to Pre-Algebra 6-8 Video Production 7-9 Biomedical Engineering 7-9	Morning Strategic Reading 5-6 EV3 Robotics Olympiad 5-6 Mobile Games 5-6 Intro to Algebra 7-9 Forensic Science 7-9 Exam Essay Writing 7-9 Arduino Electronics 7-9	Morning Fairfax Collegiate Math 3-4 Robots in Space 3-4 Writing Skills & Grammar 5-6 Alice: 3D Worlds 5-6 Intro to Geometry 7-9 Newtonian Physics 7-9 T.J. Exam Prep 7-8
Afternoon Fairfax Collegiate Math 5-6 EV3 Robotics Engineering 5-6 Filmmaking 5-6 Grammar, Usage, & Style 7-9 Mock Trial 7-9 Game Programming 7-9 Inventing and 3D Printing 7-9	Afternoon Fairfax Collegiate Math 5-6 Speech 5-6 Forensic Science 5-6 EV3 Robotics Combat 7-9 App Inventor 7-9 T.J. Exam Prep 7-8 Game Design & Modding 7-9	Afternoon Writing Fundamentals 3-4 Kodu Programming 3-4 Brain Games 5-6 Arduino 5-6 Writers' Workshop 7-9 Xbox 360 Development 7-9 Neuroscience 7-9

Herndon Booster Week Classes Aug 17-Aug 21: Please visit www.FairfaxCollegiate.com/Herndon

SUMMER PROGRAM REGISTRATION

Plan your child's schedule and register online at www.FairfaxCollegiate.com

Grade Levels and Placement

Course grade levels are rising (Fall, 2015) grade levels. Please contact us before enrolling a child in a course designated for older or younger children.

Registration Deadlines

We enroll children until classes are full. Many classes are full by late April. We maintain waiting lists for full classes.

Program Fees and Discounts

Please see pages 3 and 21.

Payment Options

A non-refundable deposit of \$100 per session (applied to the total cost of the program) is due at registration. The balance is due May 1, 2015. There is a 5% discount for full payment by March 15.

Registration Changes

Registration changes may be made at no charge if the total number of classes remains the same or increases.

Cancellation Policy

For cancellations before May 1, Fairfax Collegiate will refund program fees less the non-refundable deposit of \$100 per session. After May 1, we will provide a credit for program fees paid for use by a family member in a future program.

Emergency Contact Form

There is a one-page *Emergency Contact and Permission Form*. There is no required health form.

Complete Participation Terms

Please visit www.FairfaxCollegiate.com/summer/participation-terms.



AFTER SCHOOL ENRICHMENT AND TUTORING

After School Enrichment

Fairfax Collegiate works with over 40 PTAs to bring enrichment classes to schools across Northern Virginia.

After school courses include robotics, public speaking, writing, filmmaking, and programming.

Most after school classes are taught by summer program instructors with summer program curricula.

Classes have twelve students or fewer. Fairfax Collegiate provides all materials, supplies, and equipment.

To learn more, please visit www.FairfaxCollegiate.com/afterschool.

Academic Tutoring

Fairfax Collegiate's tutoring program specializes in middle school and high-school mathematics and test prep.

Tutors work individually with students at students' homes or public locations. Many tutors are summer program instructors.

Mathematics tutoring ranges from pre-algebra through AP Calculus. Test prep tutoring includes the T.J. and AOS Exams, the SAT and SAT Subject Tests, and AP Exams.

For more information and to contact the tutoring director, please visit www.FairfaxCollegiate.com/tutoring.





Fairfax Collegiate Summer 2015

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Dulles
St. Veronica Catholic School
3460-B Centreville Rd.

Fairfax
Geshar Jewish Day School
4800 Mattie Moore Ct.

Falls Church
St. Katherine Greek Orthodox Church
3149 Glen Carlyn Rd.

Herndon
St. Joseph Parish Hall
750 Peachtree St.

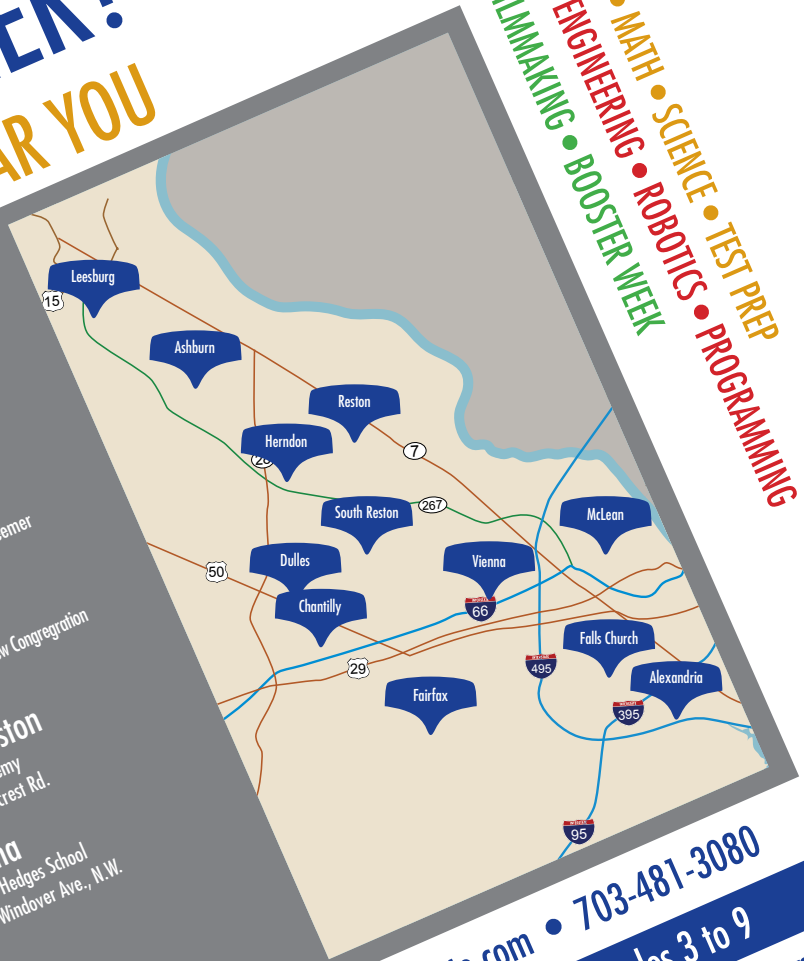
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Loudoun Country Day School
20600 Red Cedar Dr.

McLean
Lutheran Church of the Redeemer
1545 Chain Bridge Rd.

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Northern Virginia Hebrew Congregation
1441 Wiehle Ave.

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