

Fall Programs 2021 Course Descriptions

I. Math Subjects

A. Contest Math

1. Level 1

- a) Grades: **Based on pre-test, must be 4th-8th**
- b) An introduction to competition style math. Problems ranging from beginner to intermediate aspects. Problems will be characteristic of competition problems like the AMC series, mathcounts, and more.

2. Level 2

- a) Grades: **Based on pre-test, must be 4th-8th**
- b) An introduction to more advanced competition style math. Problems ranging from intermediate to advanced topics. Problems will be characteristic of competition problems like the AMC series, mathcounts, and more.

B. Math Study Sessions

1. K+1

- a) Grades: **Kindergarteners and 1st Graders**
- b) Instructional coaching characteristic of school common core math. Topics including: representing and comparing numbers, shapes, simple operations, number relationships, measurement, and geometry.

2. 2nd Grade

- a) Grades: **2nd Grade**
- b) Instructional coaching characteristic of school common core math. Topics including: base ten notation, fluency in number operations, units of measurement, and geometry.

3. 3rd Grade

- a) Grades: **3rd Grade**
- b) Developing and understanding multiplication and division strategies, algebraic thinking, fractions, and geometry.

4. 4th Grade

- a) Grades: **4th Grade**

- b) Instructional coaching characteristic of school common core math. Topics including: developing fluency in multiplication and division, multi-digit operations, fraction equivalence and operations, understanding more advanced geometric figures.

5. 5th Grade

- a) Grades: **5th Grade**
- b) Instructional coaching characteristic of school common core math. Topics including: fluency of operations with fractions, multi digit operations, measurement and data, and more advanced geometry, as well as 3D geometry.

II. Science Subjects

A. Elementary Science

1. Grades: **K - 5th**
2. A fun, interactive, applied science experience for elementary schoolers, teaching the fundamentals of life sciences, physical sciences, the scientific methods, through experimentation, and hands on learning and projects!

B. Honors Biology

1. Grades: **7th - 12th**
2. A high-school level biology course. Major themes include: cell structure and specializing, energy, chemistry of life, genetics, evolution, diversity of life, plant systems, and ecology.

C. Anatomy and Physiology

1. Grades: **4th - 9th**
2. An introductory overview of anatomy and physiology. Students will learn about major organ systems of the human body, their functions, how the systems work together, and health, fitness, and disorders associated with each system.

D. Psychology

1. Grades: **6th - 12th**
2. An introduction to the systematic and scientific study of human behavior and mental processes. Students will learn to consider theories, key concepts, and phenomena with regards to behavior,

sensation, perception, learning, cognition, motivation, developmental psychology, testing, disorders, and social psychology. They will be able to employ research methods, ethics, the scientific methods, and effectively communicate Ideas.

E. Computer Science

1. Grades: **4th - 8th**
2. An introduction to computer science and programming using the java programming language. Students will gain a fundamental understanding in programming by creating a variety of scripts for fun projects which solve problems or complete a task! Students will:
identify/characterize/define problems, design solutions, create code, read code, and analyze code.

B. Economics

1. Grades: **6-12th**
2. Introductory level economics. Topics covering the makeup of the economy firms, governments, and organizations. Discussions on the functions of consumers and producers, inflation, employment, income, and more.

III. Language Arts & Humanities

A. English Language Arts

1. Grades: **6th - 9th**
2. This course will build upon students' prior knowledge of grammar, vocabulary, writing, and reading comprehension through the use of interactive practice, and activities. Students will learn about being able to use grammar, text structures, and other aspects of writing to organize ideas, concepts, and information to create eloquent text. Students will look into various types of writing including: Narrative, Analytical, Argumentative, Journalistic, Persuasive, and more

B. Public Speaking

1. Grades: **5th - 8th**
2. An introduction to public speaking. In this course, students will develop critical speaking and listening skills. Students will be able to create oral presentations in various types of speech including: informative, persuasive, humorous interpretation, original oratory, impromptu, and more!

C. Spanish

1. Grades: **6th - 12th**
2. An introduction to Spanish which will focus on listening, speaking, reading and writing. Students will learn basic vocabulary, sentence constructions, articles, adjectives, subject-verb agreement, conjugations, and more!

D. French

1. Grades: **6th - 12th**
2. An introduction to French which will focus on speaking, listening, reading, and writing. Students will learn basic vocabulary, sentence constructions, articles, adjectives, subject-verb agreement, conjugations, and more!

IV. Arts and Fun

A. Chess

1. Grades: **All Ages**
2. Introduction to competitive chess. This course is designed to teach chess for all levels, even for students with no knowledge of the game. Students will work on techniques, puzzles, game sense and more!

C. Music Theory

1. Grades: **All ages**
2. Introduction to music theory, composition, part writing, types of instruments, history, acoustics and more!