

The Pen Ryn School 7th Grade Curriculum

Subject	Curriculum
Advanced Math	Add, subtract, multiply and divide complex fractions Measurement and geometry-parallel lines cut by a transversal, volume of 3D prisms and cylinders, surface area of 3D shapes, constructions, distance between points, similar triangles, congruent angles, degrees in regular polygons, Pythagorean Theorem Mastery of ratio and proportion-scale drawings in circumference, perimeter and area. Inverse proportional equations (direct variation equations) Solve linear equations in one and two variables-variables on both sides, graphing linear equations, slopes, Cartesian plan, properties of equality Data analysis-mean, median and mode. Charts and graphs, statistics and display data and probability
Art	Ceramic slab box - American artists before 1875 Printmaking – linoleum block Water color techniques
Library	Locate, retrieve, and interpret information for classroom research projects Conduct computer on-line research
Listening	Cite evidence from literature and infer themes Respond to peers in small group discussions and activities - Evaluate peer presentations
Math	Geometry-area and perimeter of polygons/circles, volume of 3D prisms and cylinders, surface area of 3D shapes, degrees of a triangle Introduction to ratio and proportion-scale drawings. Similar shapes and objects. Master of percent problems Introduction to probability Master of negative numbers, integers, and rules of integers Solve linear equations in one variable (multi-step) Properties of equality Rational vs. irrational numbers Introduction to square roots, squares (Pythagorean Theorem) All operations with fractions Data analysis Charts and graphs
Music	Develop further understanding of the five musical concepts Compose within various musical forms Study the importance of music in film Dramatize short stories/scenes Opportunity to sing in chorus
Physical Education	Passing games, use kicking, striking, throwing to optimally pass the ball for a scoring opportunity Anticipate an opponent's movements on offense and counteract them defensively Anticipate an opponent's movements on defense and counteract them offensively
Reading	Discover the pleasure of reading and expand comprehension in a variety of literary genres Enhance vocabulary, spelling and comprehension skills through study of word roots and prefixes Employ reading strategies for journaling and sustaining in-depth book discussions
Science	Explore and understand the scientific method through a variety of activities and a start-of-the-year experiment Student the basic units of life, all by using microscopes to view cells, learning the cell parts, and investigating the cell cycle Analyze and apply the principles of diffusion, osmosis, cellular respiration, photosynthesis, and fermentation with a variety of experiments Investigate the purpose and structure of DNA, including how it applies to the passing on of traits Use Punnett squares to explore the element of probability in the passing on of genetic conditions and characteristics Explore Evolution Theory and its supporting evidence, while understanding both the inherent meaning of a theory as well as other people's viewpoints Participate in an embryology program run by the 4H, where students incubate and hatch chicks after learning about their reproductive process Investigate many of the human body systems, including the skeletal, muscular, circulatory, digestive, immune, and nervous systems Dissect and explore a sheep's heart in order to identify the parts of the circulatory system studied in class Measure bones like a forensic scientist, analyze your heart rate, investigate lung capacity, test vitamin C levels in common juices, explore the placement of your nerves, and more
Social Studies	Trace American ideals from the Colonial era through Reconstruction Demonstrate understanding of geography's effect on the early development of the United States Analyze primary sources to give insight into the issues of the era

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Spanish	School day and schedules What choices we make to maintain health-foods and exercise Activities in and out of school Conjugating present tense verbs - Sentence structure; parts of speech Holidays and music Likes and dislikes
Speaking	Communicate through visual representation (i.e. graphic organizers, multimedia presentations and performances)
Technology	Design and build a Glogster "virtual" poster that highlights their knowledge of The Civil War or The American Revolution Understand and use Microsoft Office Suite software efficiently and appropriately
Writing	Explore criteria for effective writing in different genres including research and apply them writing Emphasize revision process including organization of content and choice of specific, powerful language Experiment with leads based on audience and purpose