Nelson Middle School



2026-2027

Grade 7

Program of Studies

7TH Grade Core Classes

Mathematics 7

Mathematics 7 continues to emphasize the foundations of algebraic thinking through problem-solving with rational numbers and proportional reasoning. Students will solve problems involving volume and surface area, compare quadrilaterals, investigate probability, and analyze data using histograms. Expressions, equations, inequalities, and functional relationships continue to be a focus as students expand their understanding of these algebraic relationships.

An end of course SOL assessment will be taken at the end of the year.

Advanced Mathematics 7

In addition to expanding upon the objectives outlined in Mathematics 7, students will complete the Mathematics 8 standards. Additional concepts include the real number system, the Pythagorean Theorem, boxplots, and scatterplots. Successful completion of Advanced Math 7 prepares students for additional honors-level math courses, contingent upon instructor recommendation and meeting course requirements.

An end of course SOL assessment will be taken at the end of the year.

Algebra I

- ***High School Credited Class***

Students will make connections and build relationships between algebra and arithmetic, geometry, and probability and statistics. Standards require students to use algebra as a tool for representing and solving a variety of practical problems. Tables and graphs will be used to interpret algebraic expressions, equations, and inequalities and to analyze behaviors of functions. Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of functions; they provide a powerful tool for solving and verifying solutions to equations and inequalities. Throughout the course, students should be encouraged to engage in discourse about mathematics with teachers and other students, use the language and symbols of mathematics in representations and communication, discuss problems and problem-solving, and develop confidence in themselves as mathematics students.

Algebra I is a high school credited class. Successful completion of Algebra I prepares students for additional honors-level math courses, contingent upon instructor recommendation and meeting course requirements.

An end of course SOL assessment will be taken at the end of the year.

Language Arts 7

English Language Arts 7 is designed to guide students into more advanced reading and analysis at the secondary level while strengthening their reading stamina and fluency. Throughout the course, students will engage with a diverse range of literary and informational texts, focusing on complex text sets. Instruction will emphasize the integration of reading comprehension, writing, vocabulary development, and grammar skills. Students will plan, draft, revise, and edit various types of writing, including narrative, expository, persuasive, and reflective compositions in response to reading. Emphasis will be placed on composing a clear thesis, developing central ideas that align with the thesis, supporting arguments with evidence, and using transitions to connect ideas effectively in multi paragraphs. Seventh-grade students will develop effective oral communication and collaboration skills to build a community of learners that process, understand, and interpret content together.

An end of course SOL assessment will be taken at the end of the year.

Civics and Economics

Standards for Civics and Economics examine the roles citizens play in the political, governmental, and economic systems in the United States. Students will examine the constitutions of Virginia and the United States, will identify the rights, duties, and responsibilities of citizens, and will describe the structure and operation of government at the local, state, and national levels. Students will investigate the process by which decisions are made in the American market economy and explain the government's role in it. The standards identify personal character traits, such as patriotism, respect for the law, willingness to perform public service, and a sense of civic duty, that facilitate thoughtful and effective active participation in the civic life of an increasingly diverse democratic society. Civic education also must emphasize the intellectual and practical skills required for responsible citizenship.

An end of course SOL assessment will be taken at the end of the year.

Life Science 7

Seventh grade Life Science emphasizes a more complex understanding of change, cycles, patterns, and relationships in the living world. Students build on basic principles related to these concepts by exploring the cellular organization and the classification of organisms; the dynamic relationships among organisms, populations, communities, and ecosystems; and change as a result of the transmission of genetic information from generation to generation. Students build on scientific investigation skills learned in previous grade levels by independently identifying questions and planning investigations. Students evaluate the usefulness and limits of models and support their conclusions using evidence. Mathematics, computational thinking, and experience in

the engineering design process gain importance as students advance in their scientific thinking. (*Virginia Department of Education, Standards of Learning, 2025)*

Health/PE 7

Students in grade seven generate and choose positive alternatives to risky behaviors. They use skills to resist peer pressure and manage stress and anxiety. Students are able to relate health choices (e.g., nutritional, physical activity) to alertness, feelings, and performance at school or during physical activity. Students exhibit a healthy lifestyle, interpret health information, and promote good health.

In grade seven, students continue to develop competence in modified versions of various game/sport, rhythmic, and recreational activities. They vary movement during dynamic and changing game situations. Recreational pursuits become an additional curriculum option, broadening lifelong physical activity options. Students relate the importance of physical activity to health, focusing particularly on obesity and stress. They create plans for improving personal fitness. Students continue to develop responsible personal and social behaviors by demonstrating decision-making skills, conflict-resolution skills, appropriate etiquette, and respect for others. Students achieve and maintain personal fitness standards and set reasonable and appropriate goals for improvement or maintenance of health-related fitness.

7TH Grade Elective Classes

For the 2025-2026 school year, seventh grade students will choose one of two elective option tracks: Option A or Option B. Students wishing to participate in either Band or Chorus will choose Option A and three additional elective classes (options include Agricultural Science, Art, Family and Consumer Sciences, and Technology). Alternatively, students who do not wish to participate in Band or Chorus will rotate through six elective courses (including Agricultural Science, Art, Career Investigations, Family and Consumer Sciences, Music Appreciation, and Technology).

Reading Plus and Math Plus courses meet every other day. These courses will be required for one semester or the year, depending on student academic progress and assessment results. Enrollment in these courses is required for students who are below grade level in reading and/or math.

Career Investigations

- **Required Course for all 7th Graders**

The Career Investigation curriculum will assist students in extending their academic and career development with information on rigorous courses, career pathways, postsecondary options, and workplace trends to help them meet their goals for successful transition to high school graduation and beyond. The Career Investigation curriculum supports the preparation of the “life ready” student and engages students in demonstrating workplace readiness skills; exploring career clusters and pathways; completing a career interest assessment; participating in a work-based learning experience; applying the decision-making process to course; selection and postsecondary options; creating the Academic and Career Plan; and connecting the world of work to responsibilities as a citizen, including personal, physical, and mental wellness.

Chorus 7 (year-long elective)

This is a performance-based class where students learn vocal technique through vocal exercises, songs, and sight-singing. Students also learn basic music theory and standard music notation. Students are required to perform in two concerts during the year.

Band 7 (year-long elective)

This intermediate level is a continuation of fundamentals with more emphasis on ensemble experience. Students perform literature requiring more advanced instrumental skill. The literature selected will be representative of a diverse spectrum of band repertoire. Students will need to demonstrate the following skills: proper posture,

embouchure, hand and playing position, tone production, intonation adjustment and pitch matching, tempo changes, rhythmic accuracy, and metric interpretation in music being studied, and articulations.

Agricultural Science 7

Students will drive deeper into the agriculture industry by discussing the basics of plant and animal science as well as forestry and natural resources; they will also develop a pet project. Once students have passed the safety quizzes, they will move into the shop to build bird houses.

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Art 7

Students will delve deeper into the finer processes from their sixth grade experience. Students will be responsible for two 3D art pieces and several 2D art projects. They will study the elements of art and the principles of design based on the seventh grade art SOLs. Some mediums students will work with will be water color, opaque paint, clay, wire, fiber arts, chalk, pen and ink, and more. Students will be expected to do some written work in the form of a self-critique for each piece of art, art research, and art tests. They will also be studying well-known artists and art movements.

Family and Consumer Science 7

Students will focus on individual development; maintain their personal environments; apply nutrition and wellness practices; manage consumer and family resources; and explore careers related to Family and Consumer Sciences, such as child care.

Music Appreciation 7 (only available to students in Option B)

Students will explore music through the ages by listening, singing, and responding to music of a variety of genres. Students may also evaluate music creatively, share their findings with the school, or write/perform their own music.

Technology 7

Students will make models of significant inventions that have advanced society. After studying these developments, they will explore contemporary technological problems facing them, their community, or the world, and they will apply systematic procedures to invent new products or innovations as solutions.

Reading Plus

This is an intensive reading course designed to help middle school students strengthen their reading, writing, and critical thinking skills. Emphasis is placed on improving reading comprehension, vocabulary development, and literary analysis through targeted

instruction and practice. Various reading programs and assessments will be utilized to track progress and provide individualized support throughout the course.

In addition to enhancing foundational reading skills, students will develop their ability to analyze texts and respond through writing, preparing them for success on the Virginia Reading Standards of Learning (SOL) in their English classes. This course provides a solid foundation for continued success in grade-level English classes and beyond. Students who are in need of additional support will be enrolled in this course based on SOL scores, assessment data, and/or teacher recommendation.

Math Plus

Math Plus is designed to support middle school students in strengthening their understanding of and mastery of foundational math skills while providing targeted remediation. This course is designed to be taken in conjunction with Math 7. Math Plus focuses on enhancing fundamental math skills and prepares students for success in grade-level math courses. Students who are in need of additional foundational support will be enrolled in this course based on SOL scores, assessment data, and/or teacher recommendation.