

## **Galax Middle School Program of Studies**

### **Grade Five Courses**

#### **Language Arts 5**

In fifth grade, reading and writing skills continue to support an increased emphasis on content-area learning and utilization of the resources of the media center, especially to locate and read primary sources of information. The student will read texts in all subjects and will acquire information to answer questions, generate hypotheses, make inferences, support opinions, confirm predictions, compare and contrast relationships, and formulate conclusions. The student will continue to develop an appreciation for literature by reading a variety of fiction and nonfiction selections. The student will continue to increase communication skills used in learning activities and will use online, print, and media resources to prepare presentations. The student will use oral and written communication skills to describe key concepts and information contained in the mathematics, science, and history and social science Standards of Learning. In addition, the student will plan, draft, revise, and edit writings to describe, to entertain, and to explain.

#### **Mathematics 5**

The fifth-grade standards place emphasis on number sense with whole numbers, fractions, and decimals. This focus includes concepts of prime and composite numbers, identifying even and odd numbers, and solving problems using order of operations for positive whole numbers. Students will develop proficiency in the use of fractions and decimals to solve problems. Students will collect, display, and analyze data in a variety of ways and solve probability problems, using a sample space or tree diagram. Students also will solve problems involving volume, area, and perimeter. Students will be introduced to variable expressions and open sentences, and will model one-step linear equations in one variable, using addition and subtraction. Students will investigate and recognize the distributive property. All of these skills assist in the development of the algebraic concepts needed for success in the middle grades.

#### **Social Studies 5 (United States History to 1865)**

Students will use skills for historical and geographical analysis to explore the early history of the United States and understand ideas and events that strengthened the union. The standards for this course relate to the history of the United States from pre-Columbian times until 1865. Students will continue to learn fundamental concepts in civics, economics, and geography as they study United States history in chronological sequence and learn about change and continuity in our history. They also will study documents and speeches that laid the foundation for American ideals and institutions and will examine the everyday life of people at different times in the country's history through the use of primary and secondary sources. The study of history must emphasize the intellectual skills required for responsible citizenship. Students will practice these skills as they extend their understanding of the essential knowledge defined by all of the standards for history and social science.

#### **Science 5**

The fifth-grade standards emphasize the importance of selecting appropriate instruments for measuring and recording observations. The organization, analysis, and application of data continue to be an important focus of classroom inquiry. Science skills from preceding grades, including questioning, using and validating evidence, and systematic experimentation, are reinforced at this level. Students are introduced to more detailed concepts of sound and light and the tools used for studying them. Key concepts of matter, including those about atoms, molecules, elements, and compounds, are studied, and

the properties of matter are defined in greater detail. The cellular makeup of organisms and the distinguishing characteristics of groups of organisms are stressed. Students learn about the characteristics of the oceans and the Earth's changing surface.

The fifth-grade standards focus on student growth in understanding the nature of science. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

\*Inclusion and resource classes are available for the above courses based on the student's IEP.

### **Physical Education 5**

Students in fifth grade apply movement principles and concepts to enhance their movement performance, personal fitness, and game strategy and tactics. They develop proficiency in games, dances, and educational gymnastics. Students demonstrate specialized skills alone, with a partner, or in a small group. They access and use resources to improve personal fitness as they exhibit a physically active lifestyle. Students continue to develop responsible personal and social behaviors as they work with others in safe and respectful ways.

## **Grade Six Courses**

### **Language Arts 6**

The sixth-grade student will be an active participant in classroom discussions. The student will present personal opinions, understand differing viewpoints, distinguish between fact and opinion, and analyze the effectiveness of group communication. The student will begin the study of word origins and continue vocabulary development. The student will read independently a variety of fiction and nonfiction, including a significant number of classic works, for appreciation and comprehension. The student will also plan, draft, revise, and edit narratives, descriptions, and explanations, with attention to composition and style as well as sentence formation, usage, and mechanics. The student will also demonstrate correct use of language, spelling, and mechanics by applying grammatical conventions in writing and speaking. In addition, reading and writing will be used as tools for learning academic concepts, and available technology will be used as appropriate.

### **Mathematics 6**

The sixth-grade standards are a transition from the emphasis placed on whole number arithmetic in the elementary grades to foundations of algebra. The standards emphasize rational numbers. Students will use ratios to compare data sets; recognize decimals, fractions, and percents as ratios; solve single-step and multistep problems, using rational numbers; and gain a foundation in the understanding of integers. Students will solve linear equations and use algebraic terminology. Students will solve problems involving area, perimeter, and surface area, work with  $\pi$  (pi), and focus on the relationships among the properties of quadrilaterals. In addition, students will focus on applications of probability and statistics.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technology such as calculators, computers, and spreadsheets. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. Students will also identify real-life applications of the mathematical principles they are learning and apply these to science and other disciplines they are studying.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

### **Social Studies 6 (US History 1865 to Present)**

Students will continue to use skills for historical and geographical analysis as they examine American history since 1865. The standards for this course relate to the history of the United States from the Reconstruction era to the present. Students should continue to learn fundamental concepts in civics, economics, and geography within the context of United States history. Political, economic, and social

challenges facing the nation reunited after civil war will be examined chronologically as students develop an understanding of how the American experience shaped the world's political and economic landscapes.

The study of history must emphasize the intellectual skills required for responsible citizenship. Students will practice these skills as they extend their understanding of the essential knowledge defined by all of the standards for history and social science.

## **Science 6**

The sixth-grade standards continue to emphasize data analysis and experimentation. Methods are studied for testing the validity of predictions and conclusions. Scientific methodology, focusing on precision in stating hypotheses and defining dependent and independent variables, is strongly reinforced. The concept of change is explored through the study of transformations of energy and matter. The standards present an integrated focus on the role of the sun's energy in the Earth's systems, on water in the environment, on air and atmosphere, and on basic chemistry concepts. A more detailed understanding of the solar system and space exploration becomes a focus of instruction. Natural resource management, its relation to public policy, and cost/benefit tradeoffs in conservation policies are introduced.

The sixth-grade standards continue to focus on student growth in understanding the nature of science. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

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## **Physical Education 6**

Students in grade six combine fundamental skills into more complex movement forms in modified game, dance, and recreational activities. Cooperative and competitive small-group games are appropriate, emphasis being on developing skills and tactical understanding. Students use feedback to initiate and maintain practice to improve skill performance. Students assess their health-related fitness status and set reasonable and appropriate goals for development, maintenance, and improvement. Social interaction becomes more complex as peer pressure becomes increasingly pronounced, impacting individual performance. Students solve problems and make responsible decisions as they work together. They identify and seek opportunities to participate in regular physical activity at school and outside the school environment.

## **Grade Seven Courses**

### **Language Arts 7**

The seventh-grade student will continue to develop oral communication skills and will become more knowledgeable of the effects of verbal and nonverbal behaviors in oral communication. The student will continue to read a wide variety of fiction, nonfiction, and poetry while becoming more independent and analytical. The student will continue to refine written composition skills, with special attention to word choice, organization, style, and grammar. Written explanations will utilize informational writing skills, and persuasive writing will be introduced. The student will continue vocabulary development through a study of figurative language and continuing study of roots and affixes. Knowledge of the impact of media on public opinion will be introduced. The student will increase proficiency in the use of print and electronic information resources and will learn ways to give credit to reference sources. The student will also demonstrate correct use of language, spelling, and mechanics by applying grammatical conventions in writing and speaking.

### **Mathematics 7**

The seventh-grade standards continue to emphasize the foundations of algebra. Students who successfully complete the seventh-grade standards should be prepared to study Algebra I in grade eight. Topics in grade seven include proportional reasoning, integer computation, solving two-step linear equations, and recognizing different representations for relationships. Students will apply the properties of real numbers in solving equations, solve inequalities, and use data analysis techniques to make inferences, conjectures, and predictions.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technology such as calculators, computers, and spreadsheets. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. Students will also identify real-life applications of the mathematical principles they are learning and apply these to science and other disciplines they are studying.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

### **Algebra I**

The standards below outline the content for a one-year course in Algebra I. All students are expected to achieve the Algebra I standards. When planning for instruction, consideration will be given to the sequential development of concepts and skills by using concrete materials to assist students in making the transition from the arithmetic to the symbolic. Students should be helped to make connections and build relationships between algebra and arithmetic, geometry, and probability and statistics. Connections also should be made to other subject areas through practical applications. This approach to teaching algebra should help students attach meaning to the abstract concepts of algebra.

These 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.

### **Social Studies 7 (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. Students will practice these skills both inside and outside the classroom as they extend their understanding of the essential knowledge defined by the standards for Civics and Economics.

### **Science 7 (Life Science)**

The Life Science standards emphasize 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. Inquiry skills at this level include organization and mathematical analysis of data, manipulation of variables in experiments, and identification of sources of experimental error.

The Life Science standards continue to focus on student growth in understanding the nature of science. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

\*Inclusion and resource classes are available for the above courses based on the student's IEP.

## **Physical Education 7**

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. The ability to analyze skill performance through observing and understanding critical elements (small, isolated parts of the whole skill or movement) is increasingly apparent, as is the application of basic scientific principles of movement and personal fitness. 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.

## **Music 5-7**

Music 5 is a year-long course that meets once a week. Students are exposed to singing, a variety of musical styles, instruments, and music reading techniques. Students listen and respond to music in differing styles daily through drawing or writing. Singing and playing instruments of each family demonstrated in class by High school students throughout the year.

5<sup>th</sup> grade music learns and sings American folk songs and begins to learn voice independence through the use of rounds. Recorders, boomwhackers, and other percussion instruments are used to expose students to playing instruments. Students learn to count rhythm through a clapping and counting system that is reinforced by percussion instruments. Students learn to sight read through the use of solfege and learn letter names, reinforced by boomwhackers and recorders.

Chorus 6 is a year-long course that meets daily. Students are exposed to a variety of choral literature and choral sounds, introduced to good singing habits and performance techniques, and expand on music reading skills developed in Music 5. The choral literature that sixth grade sings is occasionally unison, but mostly simple two-part music with accompaniment. Independent voice parts are developed through the repertoire and continued use of rounds. Singers hear examples of developed choirs, as well as exemplary choirs their age.

Students develop good singing habits through daily warm-ups that involve proper breathing, posture, and vowel production. Four performances are given annually, giving students a chance to demonstrate their ability to follow musical direction, show confidence in stage presence, and sound as a unit, as learned throughout class. Music reading skills are developed daily through sight reading increasingly difficult exercises with solfege, counting increasingly difficult rhythm patterns, and lessons about key signature, letter names, and various musical markings.

Chorus 7 is a year-long course that meets daily. Students are exposed to more involved choral literature and choral sounds, expand on good singing habits and performance techniques and music reading skills developed learned in chorus 6. The choral literature that seventh grade sings is mostly moderate two-part music and some simple three-part music with accompaniment. Voice parts are further developed through the repertoire of more parts and continued use of rounds. Singers hear examples of developed choirs, as well as exemplary choirs their age.

Students continue good singing habits through daily warm-ups that involve proper breathing, posture, and vowel production. Four performances are given annually, giving students a chance to demonstrate their ability to follow musical direction, show confidence in stage presence, and sound as a unit, as learned throughout class. Music reading skills are continued daily through advanced, sometimes two-part sight

reading exercises with solfege, counting complex rhythm patterns, and lessons about key signature, letter names, and various musical markings.

### **Technology 5-7**

The Computer/Technology Standards of Learning identify and define the progressive development of essential knowledge and skills necessary for students to access, evaluate, use and create information using technology. They provide a framework for technology literacy and demonstrate a progression from physical manipulation skills for the use of technology, to intellectual skills necessary for information use, to skills needed for working responsibly and productively within groups. Computer/technology proficiency is not an end in itself, but lays the foundation for continuous learning. The focus is on learning using technology rather than learning about technology.

To become technologically proficient, the student must develop the skills through integrated activities in all content areas K-12, rather than through one specific course. These skills should be introduced and refined collaboratively by all K-12 teachers as an integral part of the learning process. Teachers can use these standards as guidelines for planning technology-based activities in which students achieve success in learning, communication, and prepare them to meet the challenges of today's technology-rich world of work.

### **Art**

#### **Art 5**

The standards for grade five enable students to use their knowledge and skills to synthesize information, thus allowing them to produce and respond to works of art. Emphasis is on communication of personal values and beliefs in art appreciation and production. Study relates to art produced by cultures from Pre-Columbian times to 1877. Students will gain fluency in using and understanding the elements of art and the principles of design as they relate to artistic expression and communication.

#### **Art 6**

The standards for grade six emphasize exploration. Using the elements of art and the principles of design as a framework, students will investigate a variety of experiences and concepts. Students will explore various two-dimensional and three-dimensional art media, using a variety of expressive and technical approaches. Students will understand the factors that distinguish artistic styles and that clarify the role of art in American culture. Through critical examination, students will determine how artists convey meaning through the use of forms, media, and symbols. Students will test and develop their own ideas regarding the nature of art and will encounter philosophical and ethical questions. Upon the successful completion of the visual arts standards for grade six, students will possess the skills that will allow them to evaluate the effects of various influences on the discipline of the visual arts.

#### **Art7**

The standards for grade seven continue to emphasize exploration, analysis, and investigation of the creative process. Students will develop technical skills that empower them to communicate ideas visually, with the focus on realistic representations of their environment. Students will acquire knowledge that permits them to identify art styles and the periods to which those styles belong. In addition, students will become aware of a variety of art careers that they may consider. They will develop inquiry skills and vocabulary as they explore the meaning of works of art, using analysis of subject matter, themes, and symbols. Students will develop an increased awareness of the nature of art and of their relationship to it as they explore the meaning and value of works of art.

#### **Graphic Arts**

The standards of the graphic arts program emphasize use of the Adobe Elements computer program that works with manipulating graphics into works of art, advertising, and illustrations. Students will use these creations in completion of art assignments, as well as, yearbook creations.

### **Spanish 5-7**

Students are introduced to the Spanish language. Special attention is placed on letter and sound knowledge and pronunciation. Students are introduced to common vocabulary words and they learn to say common phrases in Spanish. Each successive year builds on the skills gained the previous year. The goal of the middle school Spanish exploratory classes is to give students a head start on high school Spanish so that they may begin their Spanish studies with a general knowledge of the language.