

What your child will learn in Grades 9–12



9–12

INSIDE | Math | Reading | Science | Social Studies
BACK | Physical Education | Music | Theater Arts / Dance | Art

Dallas
Independent
School
District



Grades 9–12 Mathematics

Grade: Course (Recommended course sequence)	Grade 9: Algebra I	Grade 10: Geometry	Grade 11: Algebra II	Grade 12: Pre-Calculus
What your child will learn	<ul style="list-style-type: none"> • Symbols can be used to generalize mathematical situations • Variety of methods used to represent, model, set up, and solve equations and inequalities in problem situations • Representations, tools, and technology are used to solve relevant problems 	<ul style="list-style-type: none"> • Use geometric thinking to understand the relationships between mathematical concepts • Make connections between geometry and real-life applications using geometric ideas, relationships, and properties to solve problems 	<ul style="list-style-type: none"> • Use symbols to represent mathematical situations and to express generalizations • Study functions and equations and their relationship • Use equations and functions to represent geometric curves and figures • Use techniques to understand relationships 	<ul style="list-style-type: none"> • Transform basic parent functions • Find the domain, range and maximum and minimum of functions • Investigate the properties of trigonometric functions • Represent patterns of numbers either arithmetically or geometrically
What your child will do	<ul style="list-style-type: none"> • Gather, record, and use data to determine functional relationships • Solve equations using concrete models, tables, graphs, and algebraic methods • Graph and write equations of lines given specific characteristics 	<ul style="list-style-type: none"> • Develop algebraic expressions representing geometric properties • Use logical reasoning to prove statements are true or false • Identify and apply patterns to solve meaningful problems 	<ul style="list-style-type: none"> • Recognize and manipulate patterns and algebraic relationships • Manipulate symbols to solve problems, such as factoring, simplifying expressions, and using complex numbers 	<ul style="list-style-type: none"> • Change parent functions using parts of functions • Identify different parts of a graph • Use the different properties of trigonometric functions to solve measurement problems • Use patterns to solve real world applications
What you'll see (products)	<ul style="list-style-type: none"> • Tables, graphs, equations, and verbal descriptions showing real-world situations • Pictorial or concrete models to represent algebraic concepts 	<ul style="list-style-type: none"> • Explanations of solutions to real-life problems • Charts and graphs depicting solutions to problems 	<ul style="list-style-type: none"> • Systematic steps indicating manipulated algebraic procedures • Graphs and scatterplots • Tables, charts, coordinate graphs, written descriptions, and equations 	<ul style="list-style-type: none"> • Graphs of functions • Geometric figures with angles and sides marked • Circles with arcs, chords, and tangents • Note cards and notes with instructional considerations
How you can help	<ul style="list-style-type: none"> • Ask student what he/she is learning and why • Ask student to explain his/her solution • Ask student to teach you how to do the problem 	<ul style="list-style-type: none"> • Ask student to explain his/her operational process • Ask student to check for a reasonable solution • Review the accuracy of the computations 	<ul style="list-style-type: none"> • Ask student to explain the differences in ellipses/circles and parabolas/hyperbolas • Ask students to compare and contrast linear and non-linear equations 	<ul style="list-style-type: none"> • Ask student how he/she can apply what is being learned to new situations • Help student write a problem for other family members to solve • Help student have a “study” place and time

Grades 9–12 Reading

Grade: Course (Recommended course sequence)	Grade 9: English I	Grade 10: English II	Grade 11: English III	Grade 12: English IV
What your child will learn	<ul style="list-style-type: none"> • Read fluently, regularly, and independently with clear understanding for a variety of purposes of text • Follow the writing process both independently and with others to revise and refine selected drafts • Publish for general and specific audiences • Use effective verbal and nonverbal techniques 	<ul style="list-style-type: none"> • Build an extensive vocabulary • Produce legible work with accurate spelling, capitalization, and punctuation, such as italics and ellipses • Listen and respond to presentations and performances of peers • Use appropriate appeals to support claims and arguments 	<ul style="list-style-type: none"> • Offer observations, make connections, and raise questions in response to text • Monitor/modify reading strategies using resources and asking questions • Identify challenges that authors face and strategies they use to write different types of texts • Produce class newspapers, multimedia reports, short film, and/or videos 	<ul style="list-style-type: none"> • Use study strategies, such as outlines, to recall important ideas from texts • Organize notes from multiple sources in a useful way • Use praise and suggestions to improve his/her own communication • Compare, contrast, and critique various media events in newspapers, television, and the Internet
What your child will do	<ul style="list-style-type: none"> • Learn new words • Write correct sentences • Correct errors in compositions • Present reports • Use a range of forms (videos, photographs, etc.) to communicate specific messages 	<ul style="list-style-type: none"> • Identify stated/implied main ideas and details • Plan/write compositions • Read own composition to audience • Read independently • Analyze characters in texts 	<ul style="list-style-type: none"> • Recognize similarities/differences in texts • Write for different purposes • Read own composition to audience • Use audience feedback to evaluate and improve oral presentations • Explain ideas and messages in media 	<ul style="list-style-type: none"> • Answer different types and levels of questions, both literal and interpretative • Compile written ideas and information into reports, summaries and other formats • Use a range of forms (videos, photographs, etc.) to communicate
What you'll see (products)	<ul style="list-style-type: none"> • Vocabulary lists • Written responses • Notes from discussions • Word maps and illustrations 	<ul style="list-style-type: none"> • Text notes • Planning notes for writing • Notes for a presentation • Diagrams of ideas in texts 	<ul style="list-style-type: none"> • Extended written responses • Developed and edited compositions • Written responses • Notes about media 	<ul style="list-style-type: none"> • Reading logs, book projects • Portfolio of student work • Evaluation of performance • Media products
How you can help	<ul style="list-style-type: none"> • Read newspapers, magazines, etc., with your student; discuss connections to your family's everyday life • Ask your student to share his/her writing assignments • Discuss the texts your student is reading 	<ul style="list-style-type: none"> • Help your student read books he/she is interested in and on his/her reading level • Ask questions, offer praise/helpful comments rather than criticism • Discuss the texts your student is reading • Ask your student to explain the messages in the media 	<ul style="list-style-type: none"> • Help your student read books he/she is interested in and on his/her reading level • Encourage the use of correct sentences • Encourage your student to use complete sentences and subject/verb agreement when speaking 	<ul style="list-style-type: none"> • Read newspapers, magazines, etc., to your student; discuss connections to your family's everyday life • Ask your student to share his/her writing assignments • Encourage your student to create signs, posters, charts, or brochures with household instructions or information

Grades 9–12 Science

Grade: Course (Recommended course sequence)	Grades 9 and 10: Biology	Grades 9 and 10: Integrated Physics and Chemistry	Grades 10 and 11: Chemistry	Grades 11 and 12: Physics
What your child will learn	<ul style="list-style-type: none"> • Metabolic processes and energy transfers • Living systems within living systems • Cells and viruses • Taxonomy 	<ul style="list-style-type: none"> • Properties of matter and its components • Chemical Solutions in everyday life • Changes in matter affect everyday life 	<ul style="list-style-type: none"> • Characteristics of matter • Atomic structure • Bonding of atoms • Chemical reactions 	<ul style="list-style-type: none"> • Laws of motion • Behavior of waves • Forces in nature
What your child will do	<ul style="list-style-type: none"> • Investigate and identify cellular processes • Compare the structure and functions of viruses to cells • Identify and describe the role of bacteria • Interpret the functions of systems in organisms • Compare organ systems • Identify characteristics of kingdoms 	<ul style="list-style-type: none"> • Investigate and identify properties of fluids • Relate the chemical behavior of an element • Classify samples of matter from everyday life as elements, compounds, or mixtures • Distinguish changes in matter • Relate the structure of water to its function as the universal solvent 	<ul style="list-style-type: none"> • Differentiate between physical and chemical properties of matter • Analyze solids, liquids, and gases • Investigate mixtures and pure substances • Identify characteristics of atoms in bonding • Demonstrate use of scientific nomenclature, symbols and formulas 	<ul style="list-style-type: none"> • Generate and interpret graphs describing motion • Analyze uniform and accelerated motion • Demonstrate effects of motion on objects • Examine waves in different media • Identify and explain examples of forces • Analyze electric circuits
What you'll see (products)	<p>Lab Experiments:</p> <ul style="list-style-type: none"> • Demonstrating diffusion • Viruses and cells • Frog dissection • A comparison of vertebrate systems • The effect of epinephrine on heart rate • Analyzing the work of muscles 	<p>Lab Experiments:</p> <ul style="list-style-type: none"> • Mass and volume • Separating substances in a mixture • Conservation of mass • Candy chemistry • Household substances and acids and bases 	<p>Lab Experiments:</p> <ul style="list-style-type: none"> • Density • Testing the viscosity of common liquids • Separating ink dyes • The Periodic Law • Single replacement reaction • Modeling molecular shapes • Electroplating 	<p>Lab Experiments:</p> <ul style="list-style-type: none"> • Ball and Car Race • The Softball Throw • The Paper River • Friction • The Elevator Ride • Stopping forces • Investigating static electricity • Circuits • The nature of magnetism
How you can help	<ul style="list-style-type: none"> • Help construct cell models and/or diagrams • Explain differences in animal and plant cells 	<ul style="list-style-type: none"> • Classify samples of matter from the home as being elements, compounds, or mixtures 	<ul style="list-style-type: none"> • Identify household products as mixtures and pure substances • Identify elements and compounds in the home • Use TEA Study Guide to review Objective 4 	<ul style="list-style-type: none"> • Allow student to use newspapers and magazines to analyze charts and graphs in print • Use TEA Study Guide to review Objective 5

Grades 9–12 Social Studies

Grade: Course (Recommended course sequence)	Grade 9: World Geography	Grade 10: World History	Grade 11: United States History	Grade 12: United States Government
What your child will learn	<ul style="list-style-type: none"> • How to read and interpret maps • How to read historical (expository) and biographical information • How to analyze information by sequencing, categorizing, finding the main idea, making generalizations and predictions, summarizing, and comparing/contrasting 	<ul style="list-style-type: none"> • Where people settle • What happens when societies interact • Why wars occur • Benefits/drawbacks of technology • Characteristics of the major economic systems • Significant individuals and events from World History 	<ul style="list-style-type: none"> • Major eras and defining characteristics of U.S. history • How democracy developed in the United States • How technology and conflict change the United States • How political, economic, and social changes continue to change and shape the United States • Biographies of people from various cultures 	<ul style="list-style-type: none"> • How democracy developed in the United States • Why free enterprise developed in the United States • How laws and Supreme Court decisions affect our daily lives • How political, economic, and social changes continue to change and benefit the United States • Responsibilities of the branches of government
What your child will do	<ul style="list-style-type: none"> • Read selected passages on various world regions • Use maps, charts, and other data tables to interpret how geography shapes peoples lives • Compare/contrast different regions/climates 	<ul style="list-style-type: none"> • Read about major eras and important individuals • Answer questions about geographic distributions and patterns in world history based upon maps, charts, and graphs 	<ul style="list-style-type: none"> • Read selected passages about major eras and important individuals in U. S. history • Use primary sources (U.S. Constitution, quotes), to obtain information 	<ul style="list-style-type: none"> • Read selected passages about the characteristics of U.S. government • Identify contributions and accomplishments of important people • Examine and analyze Supreme Court cases
What you'll see (products)	<ul style="list-style-type: none"> • Maps and other graphics to present geographic information • Models that represent different regions/climates and world cultures • Drawings that support the selected readings 	<ul style="list-style-type: none"> • Maps and other tools that represent geographic and historical information • Models that present the major eras and their defining characteristics of world history • Comparisons of historical accounts 	<ul style="list-style-type: none"> • Maps and other graphics to represent historical information • Models that represent the major eras and their defining characteristics • Drawings that support the selected readings • Use of primary source documents 	<ul style="list-style-type: none"> • Various graphic organizers that present important issues of U.S. government • Projects that summarize the importance of individual and government contributions
How you can help	<ul style="list-style-type: none"> • Let your student observe you reading • Encourage your student to read stories or biographies related to your native culture and others 	<ul style="list-style-type: none"> • Let your student observe you reading • Encourage your student to read stories or biographies related to your native culture and others 	<ul style="list-style-type: none"> • Let your student observe you reading • Encourage your student to read stories or biographies related to your native culture and others 	<ul style="list-style-type: none"> • Let your student observe you reading • Talk to your child about current events or government laws that impact their everyday lives

Grades 9–12 Enrichment Opportunities

	Physical Education: Foundations of Personal Fitness	Music	Theater Arts / Dance	Art
What your child will learn	<ul style="list-style-type: none"> • Learn various approaches to lifetime personal fitness as well as components of health-related fitness • Learn about the process of becoming fit, the concept of wellness, and methods of obtaining optimum levels of health 	<ul style="list-style-type: none"> • Posture • Music literacy • Vocal/Instrumental techniques • Diverse cultures through singing, playing musical instruments, moving, and listening 	<ul style="list-style-type: none"> • Story telling/movement • Many styles of dance • Pantomime • Improvisation • Vocal articulation and projection • Basic stage language • Memorization 	<ul style="list-style-type: none"> • Communicate his or her thoughts through art • Continue to build vocabulary in order to better express ideas • Work with a wide variety of art tools and media • Critique a variety of art forms
What your child will do	<ul style="list-style-type: none"> • Participate in a personal fitness program that includes activities designed to improve cardiovascular fitness • Describe components of exercise 	<ul style="list-style-type: none"> • Students are encouraged to join the band or choir. Some campuses offer orchestra—also an excellent option. 	<ul style="list-style-type: none"> • Students are encouraged to elect theatre arts or dance classes 	<ul style="list-style-type: none"> • Create original artworks to “build” a portfolio or body of work • Identify the arts of a wide variety of countries, cultures, and ethnic groups • Critique art works • Identify an area of interest: painting, drawing, sculpture, ceramics, jewelry construction, computer art, or photography
What you’ll see (products)	<ul style="list-style-type: none"> • Show evidence of students incorporating physical activity into their lifestyle through developing and maintaining health-related fitness 	<ul style="list-style-type: none"> • Small group and large group performances • Practice • Compositions • Increased self-confidence • Skills to participate in ensemble 	<ul style="list-style-type: none"> • Performances • Increased self-confidence • Interpersonal skills 	<ul style="list-style-type: none"> • Portfolio or body of work composed of a series of art works • Writing samples related to art
How you can help	<ul style="list-style-type: none"> • Encourage participation and support involvement • Contact the physical education instructor at your local campus • Visit local community centers 	<ul style="list-style-type: none"> • Encourage your child to practice • Monitor your child’s grades in all core classes • Attend concerts • Chaperone events • Volunteer 	<ul style="list-style-type: none"> • Encourage your child to practice • Monitor your child’s grades in all core classes • Attend concerts • Chaperone events • Volunteer 	<ul style="list-style-type: none"> • Show interest in artwork and be positive • Use encouragement and praise • Attend student art exhibitions • Ask about the stage of portfolio development

College and Career Readiness

The Dallas ISD is committed to educate and graduate all students ready for college. To help students achieve their higher education goals, the College and Career Readiness Department works with community and business partners and area colleges and universities. These partnerships offer students programs and resources to help them better prepare for college or a career. The assistance the department provides ranges from tutoring to helping with the college application process. The programs include:

AVID

AVID (Advancement Via Individual Determination) is a program that identifies and supports students who need additional assistance in advanced high school courses. The program not only helps students with the more rigorous coursework that will prepare them to enter college, but also provides participating students and parents with assistance through the college application process.

TALENTED AND GIFTED

The Talented and Gifted program involves adapting the standard curriculum to include more complex and challenging classes. The program takes a student-centered approach to learning; emphasizes creative and productive thinking; promotes discovery learning, problem solving and research; and nurtures students to develop their potential and abilities. The program is open to all students who meet the basic criteria and successfully complete the selection process. The programs include:

- TAG, grades one through eight
- TAG Seminar, grades seven and eight

ADVANCED PLACEMENT

The Advanced Placement (AP) program, sponsored by the College Board, is available at every high school in the Dallas ISD. It allows students to eventually earn college credit at more than 3,000 colleges and universities by taking more rigorous college-preparation courses. Every May, students have the opportunity to pass Advanced Placement tests, which can qualify them for college credit. The advantage of receiving these credits is that students will not have to take introductory classes in college in subjects for which they have passed the AP test. The AP program provides monetary assistance to students to take the tests.

CAREER AND TECHNOLOGY EDUCATION

In addition to regular academic training, Career and Technology Education prepares participating students to have successful careers in the labor force. The goal is that each student will master the basic knowledge and skills to gain entry-level employment in a high-skill, high-wage job or continue their education in college. Dallas middle and high schools offer courses in agriculture science and technology, business education, career orientation, family and consumer sciences, health science technology, marketing education, technology education, and trade and industrial education.

SAT/ACT INITIATIVE

Taking the SAT or ACT is one of the first steps in the college application process, and preparing students to be successful in these exams is a priority for the district. Goals have been set to increase the number of students who take and pass these tests in order to go to the college or university of their choice. The district's SAT initiative provides students with more opportunities to prepare to take the test and to increase their knowledge in the areas of math, critical reading, and writing.

