

Washoe County School District Family Guide to Learning

*How you can help your child succeed
in middle school*



**Washoe County
School District**



6th-8th Grade Curriculum Guide

Washoe County School District

Middle School Family Guide to Learning

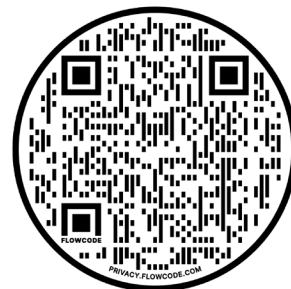
How you can help your child succeed in middle school

This guide provides an overview of what your child will learn by the end of each grade level as determined by the Nevada Academic Content Standards (NVACS), our statewide academic standards. The NVACS describe what all students should know and be able to do from kindergarten through the 12th grade. The guide focuses on the key concepts in English language arts, mathematics, science, and social studies as well as 21st Century Skills, and Social & Emotional Learning.

If you have any questions or would like more information, please feel free to contact your child's school or teacher.

For additional information about the Nevada Academic Content Standards, please visit the Nevada Department of Education's website: <https://doe.nv.gov/offices/office-of-teaching-and-learning>

Or scan this QR code with a device camera:



Washoe County School District

Every Child, By Name And Face, To GraduationSM

6TH – 8TH GRADE ENGLISH LANGUAGE ARTS

Reading – Literary and Informational Text

- Students will compare and contrast texts with different purposes and in different genres.
- Students will analyze the strength of an author's argument, identifying point of view, tone, and use of evidence.
- Students will determine a theme or central idea of a text, identifying key details and recognizing different text structures, organizational patterns, and use of language.

Writing

- Students will produce clear and coherent writing in which the development, organization, and style are appropriate to task, audience, and purpose.
- Students will write arguments to support claims with clear reasons and reliable and relevant evidence.
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- Students will write routinely over short and extended time frames for a variety of tasks, purposes, and audiences both in print and digital formats.

Language

- Students will use a variety of strategies to determine or clarify the meaning of unfamiliar words and phrases.
- Students will use correct grammar such as: pronoun case (subjective, objective, possessive); intensive pronouns (e.g., *myself*, *ourselves*); and pronoun number and person.
- Students can correctly use the conventions of standard English (capitalization, punctuation, and spelling) when writing, including the appropriate use of commas, parentheses, dashes and ellipses.

Speaking and Listening

- Students can present information, findings, and supporting evidence that are appropriate to task, purpose, and audience.
- Students will engage effectively in a range of collaborative discussions on diverse topics, texts, and issues, posing questions, citing evidence, and building on others' ideas.

Supporting Your Child's Learning at Home

- *Encourage your child to read for 30 minutes daily. Consider reading with them or having them read out loud to a family member.*
- *Register for a public library card and download the Libby App from the Washoe County Library to access online digital and audio books.*
- *Talk about what they are reading and/or writing with questions such as: "Who is the audience for this piece of writing?" "What is this piece of writing?" "Why did the author write this piece?"*
- *Watch a movie and engage in a conversation about characters, setting, and plot. Critique and discuss what you enjoyed, what you would change, and what questions you still have.*
- *Encourage your child to write daily at home for fun and reflection. Daily writing prepares students for longer pieces of writing by exercising "writing muscles".*
- *Encourage your child to find and use online information when researching topics for school or personal interest.*
- *Discuss and model appropriate online language and behaviors, including appropriate creation of digital content.*

6TH GRADE MATHEMATICS

Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze relationships between dependent (output) and independent (input) variables.

The Number System

- Apply and extend understandings of multiplication and division to divide fractions by fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend understanding of numbers to the system of rational numbers (comparing, ordering and graphing positive and negative numbers).

Statistics and Probability

- Think and reason statistically. Statistics is about using data to answer questions.
- Summarize and describe distributions.

Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems (e.g., unit rates involving such topics as pricing and speed.).

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Supporting Your Child's Learning at Home

- *With your child, search for examples of fractions, decimals and percents in the newspaper, magazines, on the radio and on the television.*
- *Determine the best value per ounce of various items at the store.*
- *When you discover an interesting shape as you walk or drive through your neighborhood, discuss with your child whether it is a polygon.*
- *Encourage your child to use their knowledge of area and perimeter in everyday situations. For example, ask your child to measure the perimeter of your living room or the area of your kitchen table.*
- *Together, look for examples of how data are used in magazines, newspapers and on the television.*
- *Encourage your child to use digital tools and apps that support development of mathematical concepts and skills.*

7TH GRADE MATHEMATICS

Students in the 7th grade will be placed in Math 7 or Math 7/8 depending on their desire and ability to take Algebra 1 in the 8th grade.

Equations and Expressions

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers (positive and negative numbers; fractions and decimals).

Statistics and Probability

- Use random sampling to draw conclusions about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

Ratio and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.

Geometry

- Draw, construct, and describe geometrical figures and describe the relationships between them.
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

Supporting Your Child's Learning at Home

- *Have your child measure the lengths of the sides of a room in your house and then figure out the perimeter and area of the room. Your child also can measure a different room and compare the perimeters and areas of the two rooms.*
- *Look for opportunities in everyday life to use large numbers with your child. For example, compare the costs of different models of cars advertised in the newspaper or compare the population of Reno with a city of a relative or friend.*
- *Look for percents in sales at local stores. Have your child figure out how much you would save on a sale item. Have your child find the tip amount on the price of the meal.*
- *Add or subtract dollars and cents to use decimals in everyday life.*
- *Look for situations in everyday life that use both positive and negative numbers, fractions and decimals.*
- *Encourage your child to use digital tools and apps that support development of mathematical concepts and skills.*

MATH 7/8

Students wishing to take Math 7/8 should have successfully completed Math 6 with additional placement recommendations provided around their assessment scores.

Expressions and Equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers (positive and negative numbers, fractions and decimals).
- Know that there are numbers that are not rational (e.g., square roots, π , etc.) and approximate them by using rational numbers.
- Work with radicals and integer exponents.

Statistics and Probability

- Use random sampling to draw conclusions about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

Ratio and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.
- Understand the connections between proportional relationships, lines, and linear equations.

Geometry

- Draw, construct, and describe geometrical figures and describe the relationships between them.
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Supporting Your Child's Learning at Home

- *Have your child measure the lengths of the sides of a room in your house and then figure out the perimeter and area of the room. Your child also can measure a different room and compare the perimeters and areas of the two rooms.*
- *Look for opportunities in everyday life to use large numbers with your child. For example, compare the costs of different models of cars advertised in the newspaper or compare the population of Reno with a city of a relative or friend.*
- *Look for percents in sales at local stores. Have your child figure out how much you would save on a sale item. Have your child find the tip on the price of the meal.*
- *Add or subtract dollars and cents to use decimals in everyday life.*
- *Look for situations in everyday life that use both positive and negative numbers; fractions, and decimals.*
- *Talk with your child about the applications of mathematics in daily life.*
- *Encourage your child to use digital tools and apps that support development of mathematical concepts and skills.*

8TH GRADE MATHEMATICS

Students in the 8th grade will be placed in Math 8 or Algebra 1 depending on their desire and the successful completion of Math 7/8 in the 7th grade.

Expressions and Equations

- Work with radicals and integer exponents.
- Understand the connection between proportional relationships, lines and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities.

The Number System

- Know that there are numbers that are not rational (e.g., square roots, π , etc.), and approximate them by rational numbers.

Statistics and Probability

- Find patterns between two characteristics of a set of objects (e.g., car weight and miles per gallon).

Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean Theorem (if you have a right triangle with legs a and b and hypotenuse c , then $a^2 + b^2 = c^2$).
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Supporting Your Child's Learning at Home

- *Talk with your child about applications of algebra and how they can relate to daily life.*
- *Discuss with your child how the Pythagorean Theorem $a^2 + b^2 = c^2$ is applied by people in some careers, such as carpenters, architects and pilots.*
- *Look with your child for uses of data in magazines, in newspapers, and on television. Talk about situations in which data might be collected to help represent information using mathematical models, such as tables and graphs.*
- *Point out examples of graphical displays and ask your child questions about the information shown.*
- *Encourage your child to use digital tools and apps that support development of mathematical concepts and skills.*

8TH GRADE ALGEBRA 1

This course utilizes the same text, curriculum and expectations as a high school Algebra 1 course. Students placed in Algebra 1 in the 8th grade should have successfully completed Math 7/8 with additional placement recommendations provided around their assessment scores. Students who earn a grade of “C” or lower will repeat Algebra 1 their freshman year.

Number and Quantity

- Extend the properties of exponents to rational exponents.
- Use properties of rational and irrational numbers.
- Reason with numbers and variables to solve problems.

Equations, Expressions and Inequalities

- Interpret the structure of expressions.
- Write expressions in equivalent forms to solve problems.
- Perform arithmetic operations on polynomials.
- Create equations that describe numbers or relationships.
- Understand solving equations as a process of reasoning and explain the reasoning.
- Solve equations and inequalities in one variable.
- Solve systems of equations.
- Represent and solve equations and inequalities graphically.

Functions

- Understand the concept of a function and use function notation ($f(x) = y$).
- Interpret functions that arise in applications in terms of the context.
- Analyze functions using different representations.
- Build a function that models a relationship between two quantities.
- Build new functions from existing functions.
- Construct and compare linear, quadratic, and exponential models and solve problems.
- Interpret expressions for functions in terms of the situation they model.

Statistics

- Summarize, represent, and interpret data on a single set of data.
- Summarize, represent, and interpret data on two categories of data or two numerical set of data.
- Interpret linear models.

Supporting Your Child's Learning at Home

- *Identify ways in which algebra is used in everyday life.*
- *Describe fees involving memberships or contracts that include a flat fee plus additional costs for extra services.*
- *Find a newspaper article that provides the results of a statistical study and discuss and describe the results.*
- *Look up car pricing in the newspaper. Work with your teen to determine the actual cost of the car including the monthly payment, insurance, and gasoline.*
- *Ask students to explain their reasoning on the mathematics they use in class and on assigned work.*
- *Encourage your child to use digital tools and apps that support development of mathematical concepts and skills.*

6TH GRADE SCIENCE

The NVACS for Science focuses on interactive science instruction that promotes analysis and interpretation of data, critical thinking, problem solving, and connections across the different areas of science. Students develop a deeper understanding of science beyond memorizing facts by experiencing scientific and engineering practices similar to those used by professionals.

Topics covered in 6th grade:

Physical Science: Thermal Energy

How can containers keep stuff from warming up or cooling down?

- Gases and liquids are made of molecules or inert atoms that are moving about relative to each other.
- The relationship between temperature and total energy of a system depends on the types, states, and amounts of matter present.
- Energy is spontaneously transferred out of hotter regions or objects and into colder ones.

Earth and Space Science: Weather and Climate

Why does a lot of hail, rain, or snow fall at some times and not others?

- Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things.
- The ocean exerts a major influence on weather and climate.

Earth and Space Science: Plate Tectonics and Rock Cycling

What causes Earth's surface to change?

- Maps of ancient land and water patterns, based on investigations of rocks and fossils, make clear how Earth's plates have moved great distances, collided, and spread apart.
- All Earth processes are the result of energy flowing and matter cycling within and among the planet's systems.

Life Science: Cells and Systems

How do living things heal?

- All living things are made up of cells.
- Within cells, special structures are responsible for particular functions.
- In multicellular organisms, the body is a system of multiple interacting subsystems.
- Each sense receptor responds to different inputs.

Supporting Your child's learning at home

- *Encourage your child to observe, ask questions, experiment, find information online, and seek their own understandings of natural and human-made phenomena around them.*
- *Find a print or digital article about a scientific discovery and summarize what it tells you.*
- *Ask questions to link material learned in science class to real-world scenarios. Why does ice float? Why is asphalt hotter than concrete on a summer day?*

7TH GRADE SCIENCE

The NVACS for Science focuses on interactive science instruction that promotes analysis and interpretation of data, critical thinking, problem solving, and connections across the different areas of science. Students develop a deeper understanding of science beyond memorizing facts by experiencing scientific and engineering practices similar to those used by professionals.

Topics covered in 7th grade:

Physical Science: Chemical Reactions and Matter*

How can we make something new that was not there before?

- Substances are made from different types of atoms which combine with one another in various ways.
- Substances react chemically in characteristic ways.
- The total number of each type of atom is conserved and thus the mass does not change.

Physical Science: Chemical Reactions and Energy

How can we use chemical reactions to design a solution to a problem?

- The term “heat” as used in everyday language refers both to thermal energy and the transfer of that thermal energy from one object to another.
- Some chemical reactions release energy, others store energy.

Life Science: Matter Cycling and Photosynthesis

Where does food come from and where does it go next?

- Plants, algae, and many microorganisms use the energy from light to make sugars from carbon dioxide from the atmosphere and water.
- Within individual organisms, food moves through a series of chemical reactions.
- Growth of organisms and populations increases are limited by access to resources.
- Food webs are models that demonstrate how matter and energy are transferred between producers, consumers, and decomposers as the three interact within an ecosystem.

Life Science: Ecosystem Dynamics

How does changing an ecosystem affect what lives there?

- Predatory interactions may reduce the number of organisms or eliminate whole populations of organisms.
- Biodiversity describes the variety of species found in Earth’s terrestrial and oceanic ecosystems.
- Changes in biodiversity can influence human resources.

Supporting Your Child’s Learning at Home

- *Encourage your child to observe, ask questions, experiment, find information online, and seek their own understandings of natural and human-made phenomena around them.*
- *With your child, read an online or print article about a scientific discovery and summarize what it tells you.*
- *Practice chemistry in your kitchen by mixing baking soda with vinegar and observe the chemical reaction. Use online chemistry apps to create experiments you wouldn’t want to do in your kitchen!*
- *Explore what living organisms can be found in and outside your home and how they form an ecosystem.*
- *Talk about recycling and how it can help our environment.*

7TH GRADE SCIENCE (Continued)

Earth and Space Science: Earth's Resources and Human Impact

How do changes in Earth's system impact our communities and what can we do about it?

- Humans depend on Earth's land, ocean, atmosphere, and biosphere for different resources.
- These resources are distributed unevenly around the planet as a result of past geologic processes.
- Changes to Earth's environments can have different impacts (negative and positive) for different living things.

*Engineering design opportunities allow children to integrate the process of solving real world problems while learning additional content.

8TH GRADE SCIENCE

The NVACS for Science focuses on interactive science instruction that promotes analysis and interpretation of data, critical thinking, problem solving, and connections across the different areas of science. Students develop a deeper understanding of science beyond memorizing facts by experiencing scientific and engineering practices similar to those used by professionals.

Topics covered in 8th grade:

Physical Science: Contact Forces

Why do things sometimes get damaged when they hit each other?

- The motion of an object is determined by the sum of the forces acting on it.
- For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force the second objective exerts on the first but in the opposite direction.

Physical Science: Sound Waves

How can a sound make something move?

- A simple wave has a repeating pattern with specific wavelength, frequency, and amplitude. A sound wave needs a medium through which it is transmitted.
- Energy is transferred by sound waves.

Earth and Space Science: Earth in Space

How are we connected to the patterns we see in the sky and space?

- Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models.
- The model of the solar system can explain eclipses of the sun and moon.
- The Earth's seasons are a result of the Earth's tilt as it orbits around the sun which causes differential intensity of sunlight on different areas of Earth across the year.

Life Science: Genetics

Why are living things different from one another?

- Organisms reproduce and transfer their genetic information to their offspring.
- Each distinct gene chiefly controls the production of specific proteins, which in turn affects the traits of the individual.
- Variations of inherited traits between parent and offspring arise from genetic differences in chromosomes, and therefore genes, which are inherited.

Supporting Your Child's Learning at Home

- *Encourage your child to observe, ask questions, experiment, find information online, and seek their own understandings of natural and human-made phenomena around them.*
- *Find an online or print article about a scientific discovery and summarize what it tells you.*
- *Relate forces and motion to the movement of a car.*
- *Observe the sun, moon, and stars to describe a pattern over time.*

8TH GRADE SCIENCE (Continued)

Life Science: Natural Selection and Common Ancestry

How could things living today be connected to the things that lived long ago?

- The collection of fossils and their placement in chronological order is known as the fossil record.
- *Animals engage* in characteristic behaviors that increase the odds of reproduction.
- Natural selection leads to the predominance of certain traits in a population and the suppression of others.

*Engineering design opportunities allow children to integrate the process of solving real world problems while learning additional content.

6TH – 8TH GRADE SOCIAL STUDIES

Social Studies Skills

- Generate and answer questions that help to “dig deeper” into a text or issue using reasoning and evidence.
- Compare and contrast sources that cover the same topic to determine credibility.
- Analyze different types of sources to determine reliability of the source related to point of view, purpose, and/or argument.
- Examine different arguments to determine those arguments’ strengths and weaknesses.
- Create explanations using evidence and reasoning with different audiences and purposes in mind.
- Participate in an academic discussion using evidence and reasoning.
- Explain the challenges that groups or individuals have faced in addressing community issues and use democratic procedures to take action regarding an important issue.

6th Grade Content Focus: Ancient Civilizations

This content traces the rise and fall of early civilizations across the globe prior to the 1500s. Students will analyze many different characteristics of early world civilizations

including the geography, history, and culture. There is a focus on spatial understanding of the world and the location of continents and countries as students explore each civilization.

7th Grade Content Focus: Early United States History

Students focus on the history of the United States from the framing of the Constitution through westward expansion. Students explore American founding documents to provide a foundation for understanding the multicultural history, economics, civics, and geography of the time period. They analyze the powers and responsibilities of citizens and examine the origins, functions, and structure of the U.S. government. In addition, students will build understanding of the major events, individuals, and ideas that have shaped early U.S. history.

8th Grade Content Focus: Early United States History and Global Studies

During the first semester, students will continue to study U.S. History up until WWII. In the second semester, students focus on global perspectives regarding contemporary issues. Students will explore the geography and cultures of the world and examine challenges facing the world community, including but not limited to: hunger, population, conflict, racism, global environmental challenges, human rights, poverty, energy scarcity, global health, education, immigration, globalization, and other concerns.

Supporting Your Child’s Learning at Home

- *Discuss the importance of culture and how it impacts history. Consider attending cultural events and celebrations in the community.*
- *Examine the culture of your family. Explore connections between your family history and historical events discussed in class.*
- *Use maps while traveling to practice giving directions and to explore landmarks.*
- *Explore museums and other cultural locations and landmarks in your community such as the Nevada Museum of Art, the Stewart Indian School Cultural Center, Nevada State Museum, or the Nevada State Railroad Museum.*
- *Watch and discuss current events in the news, exploring diverse perspectives and historical causes.*
- *Discuss the importance of civic participation and voting. Consider bringing your child to a polling location as you exercise your right to vote.*
- *Consider volunteer options in your community to engage in with your child.*

Other areas of learning beyond the areas of reading and writing, mathematics, science, and social studies include:

Music – 6th Grade

6th grade students may choose to be in beginning band, orchestra or choir. This is an excellent time to explore interests in playing an instrument and continue to explore vocal and general music concepts.

For students choosing to be in band or strings, families are encouraged to rent or purchase an instrument of their choice. Please see your band or strings teacher for instrument rental and purchase information.

Elective Choices – 7th and 8th Grades

Middle schools offer a wide range of elective offerings for students. Each site is able to choose elective offerings based on their unique population. Some options include:

- Music – Chorus, Band, Orchestra
- Spanish
- Physical Education
- Family and Consumer Science
- Computer Technology
- STEM lab
- Visual Arts
- Performing Arts
- Support classes

Please contact your child's school for the list of electives available at the site.

Middle School Assessment

The mission of the WCSD Department of Assessment is to maximize student success to achieve College and Career Readiness by promoting, monitoring and supporting a balanced assessment system. The department collaborates with other district offices and departments to provide valid and reliable data from multiple measures to inform curricular and instructional decisions and facilitates the judicious use of assessment information by a variety of users to answer questions about student learning, progress, and academic achievement.

Assessments:

- Smarter Balanced Assessment – ELA and math, grades 6-8
- Science Summative – grade 8
- English Language Proficiency – English Learners grades 6-8
- I-Ready Diagnostic – ELA and math, grades 6-8
- Classroom Assessments

Social and Emotional Competencies

- Self-Awareness: Recognizing your own emotions and accurately assessing your strengths and challenges.
- Self-Management: Effectively regulating your emotions and behaviors in different situations.
- Social Awareness: Understanding the perspective of and empathizing with others, inclusive of our diverse backgrounds.
- Relationship Skills: Creating healthy relationships, communicating clearly, and cooperating with others.
- Responsible Decision-Making: Making positive choices about personal behavior and social interactions.

21st Century Learning

Students need to be prepared for this rapidly changing world and it is critical that we give them a well-rounded experience that includes not only strong academic content, but essential skills that prepare them for careers and college and help them to think critically, solve real-world problems, speak and write clearly, and work productively with others. These competencies, known as 21st century competencies, include:

- Collaboration: working effectively in pairs or groups
- Knowledge Construction: generating ideas and understandings about the world
- Real-World Problem Solving and Innovation: defining and developing solutions to problems
- Use of Technology for Learning: using technology creatively to construct knowledge
- Self-Regulation: planning and improving work over time
- Skilled Communication: connecting and expressing ideas to an audience

MATHEMATICS LITERACY SCIENCE 21st Century Skills
Social and Emotional Learning
library music computers
SOCIAL STUDIES



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