

2020 Colorado Academic Standards

Family and Community Guides



6th Grade

To support families, communities, and teachers in realizing the goals of the Colorado Academic Standards (CAS), this guide provides an overview of the learning expectations for preschool. This guide offers some learning experiences students may engage in at school that may also be supported at home.



The comprehensive health standards in grades six through eight focus on enhancing and strengthening skills in the areas of physical, social, and emotional wellness and using those individual skills in family, school, and community environments. In each grade, the standards ask students to deepen their understanding of ways to set and maintain healthy relationships and continue to investigate healthy eating/living habits, positive communication strategies, effective decision making, and ways to ensure personal and community safety.

Expectations for 6th Grade Students:

- **Physical and Personal Wellness:** Access valid and reliable information regarding qualities of resources that enhance healthy eating behaviors; assess the connection between feelings, positive decision making, and actions; analyze health behaviors and how they impact a person throughout his/her life.
- **Emotional and Social Wellness:** Understand and apply concepts and practices that enhance mental and emotional health.
- **Prevention and Risk Management:** Analyze factors that impact a person's decision whether or not to use marijuana, illegal drugs, abuse prescription drugs, alcohol, and tobacco; use interpersonal communication skills to avoid drug use/abuse; demonstrate skills to prevent violence; advocate for safety and prevention of unintentional injuries.

Throughout 6th Grade You May Find Students:

- Analyzing appropriate resources regarding healthy eating.
- Evaluating the need for clear expectations, boundaries, and safety strategies in an individual's personal life.
- Demonstrating interpersonal communication skills to express needs, wants, and feelings.
- Exploring how to be mentally and emotionally healthy.
- Applying decision-making skills to remain substance-free.
- Creating a home, school, and/or community emergency plan to promote safety and to help prevent accidents/injuries.
- Developing strategies to avoid physical confrontations and violence.
- Evaluating the factors that lead to healthy family and peer relationships.



The dance standards in the middle school years focus on basic to intermediate level dance knowledge, as well as technique and performance skills in more specialized dance studies. In each grade, students investigate and demonstrate competence and confidence in performing various dance styles and genres, gain an awareness of fitness and the healthy body's potential for movement, refine critical thinking skills such as describing and interpreting, and creatively problem-solve through dance making.

Expectations for 6th Grade Students:

- **Movement, Technique, and Performance (Perform/Present):** Perform basic warm-ups and movement phrases with skill in a variety of dance styles and genres.
- **Create, Compose and Choreograph (Create):** Make creative choices required to develop choreography; demonstrate basic composition skills.
- **Historical and Cultural Context (Know/Comprehend):** Investigate how culture and geography are reflected in a variety of traditions and eras.
- **Reflect, Connect, and Respond (Critique/Evaluate/Refine):** Critically analyze and document dance works through verbal, written, and/or technology.

Throughout 6th Grade You May Find Students:

- Demonstrating movement warm-ups and basic technical skills in multiple styles of dance genres.
- Making creative choreographic choices and demonstrating a basic knowledge of composition.
- Experiencing dances from a variety of cultures and geographic locations.
- Analyzing and evaluating dance works created by self and others.



The drama and theatre arts standards in the middle school years focus on drama knowledge and skills, and theatre elements, to ensure a solid foundation for more specialized theatrical study in later years. In each grade, students investigate and perform various drama techniques and theatrical genres (scripted /improvisational works), examine character and setting scenarios, determine how to develop ideas as a playwright, develop the ability to describe personal preferences for dramatic and theatrical works, and respectfully critique individual/personal as well as peer performances.

Expectations for 6th Grade Students:

- **Create (Create):** Use basic movement, vocal strategies, and evidence from a scripted text to create characters; create an original dramatic work that applies the skills of intuition, curiosity, and problem solving; describe and design the technical theatre elements (scenery, lighting, props, costumes, sound) of theatre in an improvised or scripted work; develop the awareness of interrelationships between self and others to influence and inform work.
- **Perform (Perform/Present):** Develop vocal and movement skills to communicate a character's motivation and portray a believable character in an ensemble performance; identify points in a script that require or enhance the addition of a technical element (props), and demonstrate what the script requires.
- **Critically Respond (Know/Comprehend and Critique/Evaluate/Refine/Reflect):** Identify cultural perspectives (personal aesthetics, preferences, and beliefs) and the influence of cultural and historical themes in theatrical works; describe the distinct roles and responsibilities of a collaborative theatrical team; give and accept constructive and supportive feedback, and discuss the criteria for a quality performance.

Throughout 6th Grade You May Find Students:

- Analyzing and discussing the emotional impact of design elements (set, lights, costumes, props, sounds, makeup, special effects, media, publicity) on an improvised or scripted play.
- Demonstrating the components of the character development process such as gestures, movements, facial expressions, etc. and various vocal techniques.
- Identifying cultural perspectives that may influence the evaluation of drama theater work.
- Discussing the importance of constructive criticism and how it helps improve performance.
- Working collaboratively as a team/troupe to develop a performance.



The mathematics standards in middle school build on students' understanding of number and quantity. Students apply more formal statistics, probability, and algebra to model phenomena in the world around them. Students gain a deeper understanding of geometry and its application. Students also persevere in solving problems as they use strategies to apply their new tools and techniques.

Expectations for 6th Grade Students:

- **Number and Quantity:** Compare quantities using ratios and unit rates (such as miles per hour); fluently add, subtract, multiply, and divide fractions and decimals; understand the concept of negative numbers and absolute value; extend the number line and coordinate grids to include negative numbers.
- **Algebra and Functions:** Analyze relationships between variables using tables, graphs, and equations; solve one-variable equations and inequalities; apply the order of operations to find the value of an algebraic expression.
- **Data, Statistics, and Probability:** Create graphs including dotplots, boxplots, and histograms; describe data by examining the center (averages) and spread (variability) of a distribution.
- **Geometry:** Apply formulas for the area of triangles and quadrilaterals, including parallelograms and trapezoids; find the volume of rectangular boxes; calculate the surface area of three-dimensional figures.

Throughout 6th Grade You May Find Students:

- Finding a cyclist's speed in miles per hour by creating ratio tables, graphs, and number lines.
- Calculating a better deal (buying a gallon or four quarts of milk) using unit prices or ratios.
- Explaining the connection between latitude and longitude on a map and the horizontal and vertical axes on a coordinate grid.
- Recognizing situations involving negative numbers such as temperature, sea level, and bank account balances.
- Designing packaging by creating two-dimensional cutouts and folding them into three-dimensional boxes.
- Describing the difference between the independent and dependent variables for a phone plan.
- Collecting and using data to answer the question: how many hours does the typical sixth-grade student sleep?
- Explaining why average home prices are reported as medians instead of means.



The music standards in the middle school years focus on specialized musical knowledge and skills for participating in musical ensembles or classes that might include but are not limited to band, choir, orchestra, theory, music appreciation, guitar, or piano. In each middle school grade, students perform various music styles and genres (patriotic, blues, classical, country), examine the language of music through identifying and writing simple music notation, consider simple musical composition processes (such as developing a basic melody and creating lyrics or choosing various sound samples using music software programs to assemble various musical phrases), expand their ability to describe personal musical preferences, and strengthen their ability to constructively critique the music of others.

Expectations for 6th Grade Students:

- **Expression of Music (Perform/Present):** Perform accurately and expressively by responding to cues from a conductor or leader; perform music with notes from the major and/or minor scales in unison or two parts.
- **Creation of Music (Create):** Explore ways to write music using current technology that focus on rhythmic and melodic material that may include accompaniment (melody that is sung or played with piano accompaniment); demonstrate improvisation (inventing new ways to perform a piece) by responding to musical patterns provided by the teacher or by peers.
- **Theory of Music (Know/Comprehend):** Apply knowledge about the language of music (music notation) by reading, performing, and describing music appropriate to an instrument or voice part; apply understanding of meter (time signature), clef (itches) for their voice or instrument, expressive elements (loud/soft, fast/slow, connected notes/separated notes), and chord analysis.
- **Aesthetic Valuation of Music (Critique/Evaluate/Refine):** Demonstrate the ability to determine criteria, including specific musical terminology, which would be used to identify music from a variety of genres and cultures; explain the reasoning for their personal musical preferences, including how images, feelings, and emotions are expressed in particular musical pieces.

Throughout 6th Grade You May Find Students:

- Singing in large choirs or small vocal ensembles within a specific voice type (2 or 3 part voicing – soprano, alto, tenor, bass); playing various instruments (stringed/orchestral, brass or woodwind/band, percussion, guitar, piano) while exploring different musical styles (patriotic, classical, jazz); following a leader or conductor.
- Writing a short musical phrase, focusing on melody and rhythms using available technology; practicing improvisation by responding to simple musical patterns given by the instructor or by peers.
- Demonstrating comprehension of the language of music (music notation) by reading, performing, and analyzing musical notation appropriate to their voice or instrument; executing a variety of meters (time signatures), major and minor tonalities, appropriate dynamics (loud/soft), tempo markings (fast/slow), and articulations (connected/detached); analyzing and identifying chords found in the music being performed.
- Analyzing/evaluating their own musical performances based on a set of self-developed criteria incorporating specific music terminology; connecting music to their own emotions or to images; identifying musical genres based on particular musical elements.



The physical education standards in the middle school years focus on enhancing health-related and skill-related components of fitness and demonstrating knowledge and applying fitness principles and movement skills and strategies in a variety of physical activities. In each grade, the standards ask students to refine various movement concepts, strategies, and skills, analyze performance and provide feedback to peers, set and assess fitness goals, recognize diversity in skills of others, collaborate with students with varying abilities, and utilize safety procedures during physical activities.

Expectations for 6th Grade Students:

- **Movement Competence and Understanding:** Demonstrate beginning skills for a variety of activities, games, and sports; participate in activities that require problem solving, cooperation, and team building; demonstrate beginning strategies for a variety of activities, games, or sports.
- **Physical and Personal Wellness:** Understand and apply basic principles of training to improving physical fitness; recognize how health-related and skill-related fitness components contribute to a health-enhancing lifestyle that embraces physical fitness; identify opportunities in school and in the community for regular participation in physical activity to enhance physical fitness.
- **Social and Emotional Wellness:** Recognize diverse skill performance in self and in others and how diversity affects activities, games, and sport participation; choose to participate cooperatively and productively in group and individual physical activities.
- **Prevention and Risk Management:** Apply personal safety knowledge and skills to prevent and treat intentional or unintentional injury.

Throughout 6th Grade You May Find Students:

- Combining relationships, levels, speed, direction, and pathways in complex individual and group physical activities.
- Combining motor skills to play a lead-up or modified game.
- Developing a cooperative movement game that uses locomotor skills, object manipulation, and an offensive strategy, and teaching the game to another person.
- Performing flexibility exercises that will stretch particular muscles areas for given physical activities.
- Distinguishing between health-related and skill-related fitness.
- Identifying where individuals can engage in regular physical activity to meet their personal fitness goals.
- Accepting differences among classmates in physical development, maturation, and varying skill levels.
- Contributing ideas and listening to the ideas of others in cooperative problem-solving activities.
- Describing and demonstrating the correct form to push, pull, and lift heavy objects.



The reading, writing, and communicating standards in the middle school grades ask students to be critical readers of complex literary and informational texts. The standards require that students develop the writing skills necessary to convey their experience in the world, to produce thoughtful analyses of academic and real-world topics, and to develop well-reasoned arguments on relevant topics in their lives. The standards foster opportunities for students to work collaboratively with others as they develop the literacy skills to be academically successful and prepared for life after high school.

Expectations for 6th Grade Students:

- **Oral Expression and Listening:** Speak and use multimedia to present claims and findings to an audience, placing ideas in a logical order and supporting the main idea/theme with strong details and facts; actively listen to speakers in order to explain and interpret information and to identify supported and unsupported claims that may be made; work collaboratively in a variety of group settings by being prepared, listening actively, and sharing ideas.
- **Reading for All Purposes:** Read literary, informational, and persuasive texts from a variety of authors; summarize, analyze, and evaluate themes, characters, and plot in literature or key ideas, claims, and events in nonfiction; examine how text structure, point of view, and word choice affect the text's meaning, while being sure to use textual evidence to support explanations.
- **Writing and Composition:** Use technology to shape, produce, and publish grammatically correct writing that makes an argument, explains or analyzes a topic, and includes an introduction, logical development, and a thoughtful and relevant concluding statement; write narratives that develop real or imagined experiences by starting with an interesting opening, using narrative techniques such as description and dialogue while demonstrating command over different stages of writing (planning, revising, and editing).
- **Research Inquiry and Design:** Conduct short research projects to answer a question, gathering evidence from several sources and refocusing the question when needed; evaluate arguments and specific claims that are made in order to figure out which claims are supported by evidence and which are not.

Throughout 6th Grade You May Find Students:

- Collaborating in groups to explore how folktales, myths, and fables change across cultures and time; defining the characteristics and evaluating the strengths and weaknesses of these literary genres; exploring how literature expresses ideas about the place and time in which they are written; studying plays, stories, and poems not just for what they say but how the authors say it.
- Gathering, interpreting, and synthesizing information regarding how past civilizations told their stories to understand how current societies and cultures tell stories; contributing writing and multimedia texts to a class wiki or blog dedicated to a subject; participating in round table discussions, literature circles, or other groups to debate topics and/or analyze texts; composing shared pieces of writing.
- Investigating community-based or local stories that reflect culture and identity; composing photo essays and accompanying pieces of short, creative nonfiction; writing personal narratives that reflect an understanding of their relationship with others in a neighborhood, community, or culture.
- Researching claims that companies make about their products and business practices; identifying which claims are legitimate and which are not; writing a letter or review either praising or questioning a company's policies.



The science standards at the middle school build upon the foundation for students to work as scientists by asking testable questions, collecting and analyzing different types of evidence, and by providing rationale for their interpretations through reasoning and/or argumentation. Mastery of these standards will result in students deepening their understanding of science through an application and development of scientific knowledge to the solution of practical problems.

Students will experience all three “strands” of the science standards during their secondary years: physical science, life science, and earth science. The evidence outcomes in middle school blend the core ideas they learn the course with scientific and engineering practices and crosscutting concepts to support students in developing usable knowledge across three science disciplines. Students will address the following over the course of their Middle School science experience:

- **Physical Science:** Grade level expectations in middle school physical science are focused in four areas: (1) Matter and its interactions, (2) Motion and Stability: Forces and Interactions, (3) Energy, (4) Waves and Their Applications in Technologies for Information Transfer.
- **Life Science:** Grade level expectations in middle school life science are focused in four areas: 1) From Molecules to Organisms: Structures and Processes, 2) Ecosystems: Interactions, Energy, and Dynamics, 3) Heredity: Inheritance and Variation of Traits, 4) Biological Evolution: Unity and Diversity.
- **Earth and Space Science:** Grade level expectations in middle school Earth and Space Science are focused in three areas: (1) Earth’s Place in the Universe, (2) Earth’s Systems, (3) Earth and Human Activity.

The Colorado Academic Standards for middle school science are presented as a single 6-8 band of standards, rather than broken down by grade level. This means that your child's school district and teacher are responsible for organizing the middle school science standards into courses that best suit their needs and resources.

[Read the middle school science family guide.](#)



Building on the social studies skills developed in the elementary grades, students in the middle school years begin with a study of people, cultures, and ideas in the Western Hemisphere and move from there to explorations of the Eastern Hemisphere, ending with the early history of the United States. In each grade, students investigate historical events, examine geographic features and resources, consider economic decision-making processes, and understand types of governments and civic responsibility.

Expectations for 6th Grade Students:

- **History:** Analyze and interpret primary and secondary sources (original documents, maps, artifacts) to ask and research questions about the historical eras, individuals, groups, and ideas in various regions throughout the Western Hemisphere.
- **Geography:** Use geographic tools and resources to research regional differences and perspectives and make geographic inferences. Students investigate human and environmental interactions in the Western Hemisphere.
- **Economics:** Identify and explain the different types of economic systems including market, command and mixed economies. **Personal Financial Literacy:** Investigate the role of consumers within the Western Hemisphere.
- **Civics:** Analyze the relationships of different nations in the Western Hemisphere and their systems of government.

Throughout 6th Grade You May Find Students:

- Analyzing primary and secondary sources such as documents, photos, maps and artifacts to research and answer questions about the Western Hemisphere; exploring the key people, ideas and events from different perspectives and points of view to frame the “story” of history (the Aztecs, Maya, Inuit, Native American Cultures, colonizers of the Western Hemisphere, and the Columbian Exchange).
- Examining places and regions in the Western Hemisphere through maps, charts, and geospatial technologies (geographic information systems, Google Earth, global positioning systems); analyzing the positive and negative interactions between humans and the physical world (landforms, resources, climate); presenting potential solutions to problems surrounding issues of resource distribution, migration patterns, and population growth.
- Defining economic systems (traditional, command, market, and mixed economies); use economic reasoning to explain how specialization of production can result in more interdependence of examining how economic systems interact in an interdependent global economy. **Personal Financial Literacy:** investigating the role of consumers in the Western Hemisphere.
- Analyzing the relationships of different nations in the Western Hemisphere; describing systems of government in the Western Hemisphere.



The visual arts standards in the middle school years build on the general art knowledge and skills developed at the elementary level. In addition, students explore and examine the role of design and technology in making, documenting, and presenting works of art. Students create, discuss, reflect on, and compare works of art—across historical periods and cultures—using materials, processes, tools, and vocabulary in more complex ways. Art careers and art-depicting issues that are important to communities are also examined. At this level, middle school art students extend their artistic vision beyond self and look at their artistic practice as part of a much larger community.

Expectations for 6th Grade Students:

- **Observe and Learn to Comprehend (Know/Comprehend):** Use art-specific vocabulary to talk about how art is created by artists across cultures and time periods (media, process, tools and technology).
- **Envision and Critique to Reflect (Critique/Evaluate/Refine):** Practice critiquing works of art using art vocabulary and multiple points of view.
- **Invent and Discover to Create (Create/Present):** Make multiple plans and experiment with using art materials in new and unusual ways; use technology to document and talk about artwork and the art-making process.
- **Relate and Connect to Transfer (Connect/Apply/Transfer):** Explain the importance of art in everyday life for people from various communities or cultures; describe how art can make a statement about an important issue.

Throughout 6th Grade You May Find Students:

- Analyzing and interpreting works of art and art concepts using specific technical vocabulary (symbolism, two dimensional, three dimensional, texture, hues).
- Using and connecting ideas, themes, and issues in art to other subjects such as literature, history, science, mathematics, and social studies.
- Using various approaches for planning, including technology, to make art.
- Experimenting to use materials in new and unusual ways; considering new and multiple approaches to planning.
- Examining and explaining the importance and purposes of art across time and culture and using this knowledge to inform art making.



The world language standards are organized in language proficiency range levels. Language proficiency refers to the degree of skill with which a person can use a language to understand, speak, read, write, and listen in real-life situations. Colorado's standards provide guidance for the introduction of a new language (novice-low) through the minimum proficiency range deemed postsecondary and workforce ready (advanced-low).

The world languages standards in the middle school years create a roadmap to guide Grade 6-8 students in the process of learning a new language and understanding diverse cultural perspectives, as well as developing insights into their language and culture at the appropriate developmental stage. The standards reflect a performance-based discipline which emphasizes communication skills (interpersonal speaking and writing; interpretive reading, listening, and viewing and presentational speaking and writing) in a new language to navigate real-life situations. Students use the newly acquired language while making connections with other academic disciplines and investigation and interaction of cultural practices and products to better understand multiple perspectives. These standards prepare students to participate more fully in the interconnected global community and the international marketplace.

Why are world language standards organized in language proficiency range levels? Language proficiency refers to the degree of skill with which a person can use a language to understand, speak, read, write, and listen in real-life situations. Colorado's standards provide guidance for the introduction of a new language (novice-low) through the minimum proficiency range deemed postsecondary and workforce ready (advanced-low). Progression through levels of proficiency is influenced by program design such as grade levels, competency-based programs, time for language instruction, and immersion programs. Language programs in many schools districts have multiple entry points. Both the length and the type of program design impact both language acquisition and proficiency level for students.

To view the expectations for middle school students at the various proficiency ranges, go to:
<http://www.cde.state.co.us/standardsandinstruction/2020cas-wl-ms-guides>