High School
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.
Comprehensive Health

The comprehensive health standards in Grades 9-12 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 High School Students:

- **Physical and Personal Wellness**: Apply effective decision-making skills in interpersonal relationships and sexual health; provide support for others in making healthy choices about sexual activity; demonstrate personal responsibility for healthy eating and analyze factors that influence dietary choices.

- **Social Emotional Wellness**: Advocate to improve and maintain positive mental and emotional health for self and others.

- **Prevention and Risk Management**: Access valid information and resources pertaining to sexual assault, violence prevention, marijuana, illegal drugs, abuse of prescription drugs, alcohol, and tobacco; develop interpersonal communication skills and strategies to prevent violence; analyze factors that influence a person’s decisions pertaining to alcohol, tobacco, and other drug use; develop strategies to prevent violence and identify the emotional and physical impacts that violence brings to individuals and families.

Throughout High School You May Find Students:

- Examining the causes, symptoms, and effects of emotional health (e.g., stress, depression, anxiety, and suicide).

- Advocating for themselves and others to improve or maintain positive mental and emotional health.

- Utilizing interpersonal communication skills to refuse or avoid alcohol, tobacco, marijuana, and other drugs.

- Analyzing how risk behaviors impact overall wellness (e.g., substance misuse/abuse, sexual behaviors, and self-harm).

- Demonstrating ways to take responsibility for healthy eating.

- Locating reliable school and community resources that provide information about risky behaviors (e.g., sexual assault, bullying, violence, and substance abuse).

- Analyzing internal and external influences/pressures in social and interpersonal situations.

- Examining the importance of respect for individual differences.

- Utilizing strategies to develop healthy interpersonal relationships.

- Analyzing the components of healthy and unhealthy relationships.

- Demonstrating effective strategies to resolve conflict in nonviolent ways.

- Setting and attaining goals to improve personal health.

- Developing self-management plans.
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Computer Science

The computer science standards at the high school grades build upon the foundation for students to work as in many fields 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 computer science through an application and development of scientific knowledge to the solution of practical problems. Students will experience all three “strands” of the computer science standards during their secondary years: computational thinking, computing systems and networks, and computer programming.

Computer Science Learning Expectations for High School Computer Programming:

- The creation of a computer program requires a design process.
- The process of programming involves solving computational problems (i.e. how to organize and sort through data).
- Collaborative tools, methods, and strategies can be used to design, develop, and update computational artifacts (i.e. software, website, animations).
- Client-based design requirements and feedback are essential to a quality computational product or service.
- Computing solutions can have impacts (personal, ethical, social, economic, and cultural) based on their use.
- Security and software licensing can present constraints and restrictions in computational design and development (i.e. copyright laws, intellectual property)

Throughout High School You May Find Students:

- Applying the design process needed to change a computational artifact over several versions.
- Using pseudo code and flowcharts to communicate with a client design options (i.e. everyday language).
- Creating original code that meets specified design requirements.
- Fixing code that is not operational.
- Using positive constructive feedback to help improve a peer’s program.
- Pursuing learning opportunities similar in nature to experiences they will have in a future computer science professions. It is important that students follow protocols and frameworks that they would see in the modern workplace to identify problems, develop a programming solution, and bring their artifact to life for review by outside clients. Using industry-standard practices for working with clients.
- Considering how personal data is vulnerable in both storage and transmission.
- Learning about the steps required for protecting intellectual rights of your computational artifact.
- Evaluating the benefits to the developers of open source (Android) and proprietary (i.e. Microsoft) software.
Computer Science Learning Expectations for High School Computing Systems and Networks:

- Communication between computers (and over the Internet) can be configured in many different ways and consist of several hardware and software components.
- Computer hardware, the lowest level of a computer system, consists of many different parts, each providing a specialized function.
- Systems thinking is a way of examining the various components and use cases that go into a given design.
- Client considerations drive system design.
- Robust computing systems require data protection and multiple methods of recovery.

Throughout High School You May Find Students:

- Using online network simulators to experiment with routers and switches.
- Brainstorming ways to improve the performance of an older computer using hardware upgrades.
- Comparing and contrasting operating systems for processing, to determine the suitability of applications to be installed on the computer.
- Writing a technical plan for promoting open source or commercial software.
- Using Raspberry Pis and Arduinos, create a network system that will display a software, hardware, and network integrated system.
- Creating a website that teaches other students how to practice helpful security habits for a computer system when using the Internet.
- Creating a project schedule for computing project completion.
- Interviewing prospective clients utilizing student in class individually and as a team.

Computer Science Learning Expectations for High School Computational Thinking:

- Computational thinking is used to create algorithmic solutions to real world problems.
- Algorithms can be represented and used in different ways (e.g., languages, diagrams, pseudo code).
- Algorithm development and use is an ongoing process that involves adapting, critiquing, and troubleshooting programs and/or processes.
- Large, complex problems can be broken down into smaller, more manageable components.
- Abstraction is used to reduce complexity of larger problems by focusing on main ideas.
- Data can be represented in different ways for storage and exchange. Many problems appropriate for solving with a computer are organized around patterns.
- Data from a computer program can be visually presented to better understand and articulate solutions to a problem.
Throughout High School You May Find Students:

- Producing a progress report detailing the development of an algorithm.
- Demonstrating debugging an algorithm.
- Breaking down problems into smaller problems identifying patterns in each level.
- Proposing a logical sequence to fix the problem.
- Sorting data using keywords and look for patterns to represent the essential nature of the data.
- Proposing an app that utilizes a database.
- Analyzing data about the effect of resource consumption and development to draw conclusions about sustainable use.
- Analyzing Snapchat and Instagram for popular program patterns.
- Designing a game that demonstrates efficient use of code.
- Contributing to a group outcome regarding data storage for a project.
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Dance

The dance standards for the high school years divide into two different pathways: fundamental and extended. In both, the focus is on advanced skill levels of technical proficiency and body mechanics and awareness, along with utilizing artistic and expressive performance skills. When embarking on the fundamental pathway students investigate, understand and demonstrate multiple choreographic principles, ideas, meanings, and intent during the process of crafting dance works. Students will also understand the process of creating, rehearsing, performing, and evaluating various dance works from an assortment of genres, styles, and cultures.

Expectations for Students in the Fundamental Pathway:

- **Movement, Technique, and Performance (Perform/Present):** Demonstrate kinesthetic awareness (body mechanics); perform dance with technical proficiency, expression, and artistry while applying the components of the performance process.
- **Create, Compose and Choreograph (Create):** Apply the creative process to dance-making; use intent and a variety of different stimuli to create and develop original dance works.
- **Historical and Cultural Context (Know/Comprehend):** Connect personal, cultural, and historical dance styles to create a dance work.
- **Reflect, Connect, and Respond (Critique/Evaluate/Refine):** Respond and reflect upon new and classic works of dance.

Throughout the Fundamental Pathway, You May Find Students:

- Demonstrating an advanced level of kinesthetic awareness (body mechanics) and technical proficiency while combining artistic expression to performances.
- Articulating that choreography is organized with specific form and order for a reason; creating dances through the use of choreographic techniques; utilizing the creative process when developing new dance works.
- Translating the knowledge of cultural and historical dance into performances; articulating how world dance traditions are influenced by the values of a society.
- Responding, reflecting, and analyzing the connections of the creative process to the final product of a cultural dance work or classic masterpiece.

Expectations for Students in the Extended Pathway:

- **Movement, Technique, and Performance (Perform/Present):** Perform advanced movement with artistic interpretation and expression; produce a multi-faceted dance performance; work independently and collaboratively with peers.
- **Create, Compose, and Choreograph (Create):** Refine the creative process in dance-making; compose dance works that convey meaning and intent.
- **Historical and Cultural Context (Know/Comprehend):** Analyze and articulate personal connections to cultural and historical dance forms and traditions.
• **Reflect, Connect, and Respond (Critique/Evaluate/Refine):** Apply formal, critical analysis to multiple forms of dance in oral, written, or technological formats.

**Throughout the Extended Pathway, You May Find Students:**

- Demonstrating and performing advanced movement as a creative artist.
- Showing leadership by creating dance works for others in dance performances.
- Refining their personal creative process and problem solving by combining multiple choreographic strategies.
- Independently investigating historical dance traditions to inspire new dance works.
- Articulating an understanding of the connections dance has to society, historically and in the current cultural context.
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**Drama and Theatre Arts**

The drama and theatre arts standards in the high school years focus on specific drama knowledge and skills and theatre elements to develop a solid foundation for specialized theatrical study (acting/character and script analysis, playwriting, technical theatre such as lights/sound/set and costume design, directing, and film studies). Through a variety of specialized theatre courses, students research, investigate, and perform numerous dramatic techniques and theatrical genres, such as scripted and improvisational works. They also examine character development and a variety of setting scenarios, develop ideas as playwrights, directors, designers, and technicians, describe their own personal preferences for drama and theatre works, and respectfully critique themselves and the performances of others.

**Expectations for Students in the Fundamental Pathway:**

- **Create:** Demonstrate knowledge of fundamental vocal and movement techniques; demonstrate knowledge of a character and employ several strategies to understand the goals of a particular character; demonstrate fundamental knowledge of design and technology in all areas of technical theatre (lights/sound/set and costume design).

- **Perform:** Rehearse and perform an original or scripted scene, play, or monologue; use previously acquired skills to demonstrate the ability to rehearse and exhibit fundamental vocal and purposeful movement techniques; participate as a member of a technical crew (lights/sound/set design/props) and management team and contribute ideas to the design of a production; demonstrate an understanding of the interrelationship among the technical aspects of production, onstage performers, and audiences.

- **Critically Respond:** Research the ways in which artists have used self-reflection to document and refine their work; identify and describe the influence of other artists on the development of their own artistic work; critique and evaluate artistic choices and personal reactions to dramatic presentations using guidelines for evaluating a theatrical production; demonstrate objectivity in assessing one’s personal abilities in creative endeavors and an ability to receive and act upon coaching feedback and constructive criticism.

**Throughout the Fundamental Pathway, You May Find Students:**

- Analyzing character to help understand human behavior; researching numerous historical and inventive aspects of technical theatre to obtain a deeper understanding of the field; using design and technology to recreate environment, enhance a production, and bring a creative work to life.

- Demonstrating the ability to create a believable dramatic portrayal as a performer and/or technician; participating as a member of a technical crew or management team.

- Exploring how the production process impacts the final product; communicating effectively one’s point of view regarding a character; discovering how theatre etiquette and ethics enhance the theatrical experience.
Expectations for Students in the Advanced Pathway:

- **Create (Create)**: Demonstrate knowledge of more advanced vocal and movement techniques; demonstrate strong knowledge and understanding of character qualities and points of view; employ strategies to discover the goals/intentions of a particular character, ways to overcome obstacles in the plot, and tactics to achieve the goals of a particular character; analyze, research, and design for technical theatre (lights/sound/set and costume design); employ a variety of performance techniques to create dramatic meaning.

- **Perform (Perform/Present)**: Portray a believable character in situations from scripted works; demonstrate the ability to rehearse and exhibit more advanced vocal and movement forms and skills; lead a technical crew in a production; implement a major design element (lights/sound/set and costume design) to enhance theatrical productions; apply knowledge of safety procedures and practices in the use of theatre equipment, tools, and raw materials.

- **Critically Respond (Know/Comprehend and Critique/Evaluate/Refine)**: Use problem-solving techniques to determine if another actor’s or one’s own performance is believable and truthful; make an informed decision about the quality of a theatrical production; reflect and revise critical choices pertaining to dramatic texts and performances while incorporating personal decisions/preferences; document and reflect on one’s own work, and identify successful approaches that could be applied in the development of future work.

Throughout the Advanced Pathway, You May Find Students:

- Analyzing the script and making annotations to enhance character development; exploring alternative choices in technology to help convey a production concept; creating a promptbook (a master copy of the script containing details for the entire production such as actor and technical cues) and researching the background of a play to enhance the overall product.

- Adjusting to other actors’ decisions within a performance; assuming responsibility for the coordination of all aspects of a production by stage managing a theatrical event; writing a one-act play that includes fully developed characters, believable dialogue, and logical plot outcomes.

- Making artistic choices based on research; devising specific methods for documenting and assessing one’s own artistic development throughout participation in a drama or theatre project as a performer or technician; exploring quality scripted works to inform one’s own playwriting.

Expectations for Students in the Professional Pathway:

- **Create**: Apply and create vocal and movement techniques; portray character qualities and points of view; employ and refine strategies to discover the goals/intentions of a particular character, ways to overcome obstacles in the plot, and tactics to achieve the goals of a particular character; analyze, research, and design for technical theatre (lights/sound/set and costume design) for a production.

- **Perform**: Portray a believable character from contemporary and classical scripted works; lead a technical crew in a production; implement a major design element (lights/sound/set and costume design) that aesthetically and conceptually elevates a theatrical production; apply knowledge of safety procedures and practices in the use of theatre equipment, tools, and raw materials.

- **Critically Respond**: Use problem solving and communication techniques to determine if another actor’s or one’s own performance is believable and truthful; make an informed decision about the quality of a theatrical production based on social, cultural, and historical understandings; reflect and revise critical
choices pertaining to dramatic texts and performances while incorporating personal decisions/preferences in connection to issues that may impact audiences; document and reflect on one’s own work, and incorporate successful approaches that could be applied in the development of future work.

Throughout the Professional Pathway, You May Find Students:

- Leading peers in the implementation of interesting choices that enhance character development; committing to professionalism in rehearsal process; exploring alternative staging and design conventions to support a production concept; creating support materials that show in-depth process work, and researching the background of a play to enhance the overall product.

- Seamlessly adjusting to other actors' decisions within a performance; assuming responsibility for the coordination of all design and technical aspects of a production; writing or directing a play that includes fully developed characters, believable dialogue, and logical plot outcomes.

- Examining how the production process impacts the final product (through Socratic seminar, portfolio presentations, or audience feedback); communicating and connecting different points of view regarding a character and production concept.
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Mathematics

The mathematics standards in the high school grades build on the strong foundation of number, algebra, statistics, and geometry developed during elementary and middle school. The study of geometry shifts to include more reasoning and proving mathematical ideas. This thinking is extended to all parts of mathematics as students construct viable arguments and critique the reasoning of others. Students learn to apply different kinds of non-linear functions to describe quantities that change in the world around them. They confront problems and persevere in solving them as they strategically apply mathematical tools and techniques.

Expectations for Integrated Mathematics 1 Students:

- **Number and Quantity**: Choose the correct units for a problem such as feet versus miles and consider these units when solving problems.
- **Algebra and Functions**: Fluently write equations for lines; solve systems of linear equations and inequalities; represent the relationship between two quantities using linear and exponential functions; rearrange exponential equations by using properties of exponents.
- **Data, Statistics, and Probability**: Estimate the mean and standard deviation of a population from sample data; describe if two variables are strongly or weakly correlated; explain the difference between correlation and causation.
- **Geometry**: Fluently use rotations, reflections, and translations to show relationships between shapes; prove theorems about lines, angles, triangles, and parallelograms.

Throughout Integrated Mathematics 1 You May Find Students:

- Explaining why a scientist needs to know if the distance to a nearby asteroid was calculated using miles or kilometers.
- Using graphs, tables, and equations to describe the spread of a virus over time.
- Determining the monthly interest rate for a savings account with an annual interest of 4.5%.
- Distinguishing whether the growth of a population of prairie dogs is linear or exponential.
- Writing geometric proofs to prove ideas about angles, lines, and figures.
- Examining the relationship between a person’s income and their parents’ income and making an argument about the relationship between the incomes.
- Using spreadsheets and other technologies to create and represent profit and/or losses of a business.
- Determining the amount of water wasted by a dripping faucet over the course of one year.
Expectations for Integrated Mathematics 2 Students:

- **Number and Quantity**: Calculate with fractional exponents and imaginary numbers (complex numbers); explain why the solutions to some quadratic equations are imaginary.

- **Algebra and Functions**: Fluently graph functions and interpret key features of each function; fluently add, subtract, and multiply polynomials; use tables, graphs, and equations to solve systems of linear and quadratic functions; represent the relationship between two quantities using quadratic functions; rearrange quadratic equations by factoring and completing the square; compare and contrast linear, quadratic, and exponential functions.

- **Data, Statistics, and Probability**: Compute probabilities of multiple events and determine if one event influences another.

- **Geometry**: Fluently determine if two triangles are congruent or similar; prove geometric theorems about congruency, similarity, and circles; prove and use the Pythagorean Theorem; develop the trigonometric ratios (sine, cosine, tangent) and use them to solve a variety of right triangle problems.

Throughout Integrated Mathematics 2 You May Find Students:

- Creating quadratic equations that describe the gravitational forces on the earth which cause the trajectory of a kicked football.
- Calculating where a snowboarder will land after completing a jump using a linear equation to model the height of the mountain and a quadratic equation to model the path of the jump.
- Determining the dimensions of a soup can that minimizes packaging materials.
- Calculating heights of buildings, flagpoles, and trees using ratios (trigonometry).
- Exploring how the Hopewell people of the Ohio Valley (2000 years ago) created earthworks using right triangles.
- Researching how imaginary numbers are used in the production of movies.
- Calculating the probability of getting cancer given a history of smoking.
- Estimating the volume of a tree trunk by relating it to the volume of a cylinder.
- Using tracing paper to define a series of rigid motions (translations, rotations, and reflections) to get one shape on top of another, proving they are congruent.
Expectations for Integrated Mathematics 3 Students:

- **Algebra and Functions**: Fluently write formulas for arithmetic and geometric sequences; fluently divide polynomials; create graphs of polynomials by identifying zeros and describe key features of the graph; solve rational and radical equations; create equations and inequalities for linear, quadratic, rational and exponential functions; find inverse functions; use logarithms and technology to solve exponential equations; describe patterns that repeat in cycles using trigonometry.

- **Data, Statistics, and Probability**: Recognize the purpose of surveys, experiments, and observational studies; compare treatment and control groups from an experiment, explain the purpose of a normal curve; calculate margin of error.

- **Geometry**: Fluently use coordinates to calculate lengths and angles using equations derived from the Pythagorean Theorem; construct geometric figures using a compass and straightedge; apply proportional reasoning to find arc lengths and areas for parts of circles; determine if two lines are parallel or perpendicular by calculating their slopes.

Throughout Integrated Mathematics 3 You May Find Students:

- Modeling the motion of a Ferris wheel, pendulum, or ocean tides with a trigonometric function.
- Describing the meaning of a ± 4% margin of error for a presidential candidate polling at 48%.
- Examining control and treatment group data from an experiment testing the effectiveness of a new study technique.
- Comparing the strengths of earthquakes using logarithms.
- Explaining how a mortgage calculator uses geometric series to determine monthly payments.
- Applying the concept of area to calculate the population density for various parts of Colorado.
- Verifying the best location (that minimizes patient/visitor drive times) for a hospital serving three different communities.
- Designing a city’s architectural plans using drafting tools and explaining the geometric principles underlying the plans.
- Using properties of circles to explain why the outside wheels of a car turn faster than the inside wheels of a car when turning a corner.
Expectations for Algebra 1 Students:

- **Algebra and Functions**: Choose the correct units for a problem such as feet versus miles and consider these units when solving problems; fluently write equations for lines; add, subtract, and multiply polynomials; rearrange quadratic equations by factoring and completing the square; represent the relationship between two quantities using linear, quadratic, and exponential functions; compare and contrast linear, quadratic, and exponential functions; use tables, graphs, and equations to solve systems of linear and quadratic functions.

- **Data, Statistics, and Probability**: Describe if two variables are strongly or weakly correlated; explain the difference between correlation and causation.

Throughout Algebra 1 You May Find Students:

- Distinguishing whether the growth of a population of prairie dogs is linear or exponential.
- Creating quadratic equations that describe the motion of the earth or the trajectory of a kicked football.
- Explaining why a scientist needs to know if the distance to a nearby asteroid was calculated using miles or kilometers.
- Using graphs, tables, and equations to describe the spread of a virus over time.
- Determining the amount of water wasted by a dripping faucet over the course of one year.
- Examining the relationship between a person’s income and their parents’ income and making an argument about the relationship between the incomes.
- Using spreadsheets and other technologies to create and represent profit and/or losses of a business.
- Calculating where a snowboarder will land (on a mountain) after completing a jump using a linear equation to model the height of the mountain and a quadratic equation to model the path of the jump.
Expectations for Geometry Students:

- **Geometry**: Fluently determine if two triangles are congruent or similar; fluently use coordinates to calculate lengths and angles; prove geometric theorems about congruency, similarity, and circles; construct geometric figures using a compass and straightedge; prove and use the Pythagorean Theorem; develop the trigonometric ratios (sine, cosine, tangent) and use them to determine lengths and angles of right triangles; apply proportional reasoning to find arc lengths and areas for parts of circles; calculate lengths and areas of figures on a coordinate plane using equations derived from the Pythagorean Theorem; determine if two lines are parallel or perpendicular by calculating their slopes; describe rotations, reflections, translations, and dilations algebraically on a coordinate grid.

Throughout Geometry You May Find Students:

- Applying the concept of area to calculate the population density for various parts of Colorado.
- Determining the dimensions of a soup can that minimizes packaging materials.
- Using constructions tools and software programs to explore and construct properties of shapes and proving theorems based on these explorations.
- Writing geometric proofs to prove ideas about angles, lines, and figures.
- Calculating heights of buildings, flagpoles, and trees using ratios (trigonometry).
- Using properties of circles to explain why the outside wheels of a car turn faster than the inside wheels of a car when turning a corner.
- Verifying the best location (that minimizes patient/visitor drive times) for a hospital serving three different communities.
- Estimating the volume of a tree trunk by relating it to the volume of a cylinder.
- Exploring how the Hopewell people of the Ohio Valley (2000 years ago) created earthworks using right triangles.
- Designing a city’s architectural plans using drafting tools and explaining the geometric principles underlying their plans.
- Using tracing paper to define a series of rigid motions (translations, rotations, and reflections) to get one shape on top of another, proving they are congruent.
Expectations for Algebra 2 Students:

- **Number and Quantity**: Calculate with fractional exponents and imaginary numbers (complex numbers); explain why the solutions to some quadratic equations are imaginary.
- **Algebra and Functions**: Fluently divide polynomials; fluently write formulas for arithmetic and geometric sequences; create graphs of polynomials by identifying zeros and describe key features of the graph; create equations and inequalities for linear, quadratic, rational and exponential functions; solve rational and radical equations.
- Solve systems of equations and inequalities; find inverse functions; use logarithms and technology to solve exponential equations; describe patterns that repeat in cycles using trigonometry.
- **Data, Statistics, and Probability**: Recognize the purpose of surveys, experiments, and observational studies; compare treatment and control groups from an experiment; estimate the mean and standard deviation of a population from sample data; explain the purpose of a normal curve; calculate margins of error; compute probabilities of multiple events and determine if one event influences another.

Throughout Algebra 2 You May Find Students:

- Determining the monthly interest rate for a savings account with an annual interest of 4.5%.
- Explaining how a mortgage calculator uses geometric series to determine monthly payments.
- Researching how imaginary numbers are used in the production of movies.
- Modeling the motion of a Ferris wheel, pendulum, or ocean tides with a trigonometric function.
- Comparing the strengths of earthquakes using logarithms.
- Examining control and treatment group data from an experiment testing the effectiveness of a new study technique.
- Calculating the probability of getting cancer given a history of smoking.
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Music

The music standards in the secondary years are differentiated for skill development: Novice, Intermediate, Proficient, Accomplished, and Advanced. These levels allow for personalized placement to provide rigorous and appropriate musical experiences for students at any grade level. Participants will experience music through performance (expression), creation of music, music theory, and aesthetic valuation of music (critique, evaluate, and refine).

Expectations for Students Completing Novice through Proficient Coursework:

- **Expression of Music (Perform/Present):** Perform accurately and expressively making interpretive and creative choices; incorporating practice and refinement processes to develop independent musicianship.
- **Creation of Music (Create):** Explore ways to create original rhythmic and melodic phrases of music through writing (composing), inventing (improvisation), and revising (arranging) existing music using current and traditional technology.
- **Theory of Music (Know/Comprehend):** Apply knowledge about the language of music (music notation) by reading, performing, listening, and describing music appropriate to an instrument or voice part; apply understanding of meter (time signature), clef (pitches) 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):** Interpret and describe musical responses and performances from a variety of styles, genres, and cultures using music terminology and criteria; explain the reasoning for personal preferences and how music is used in society and culture across time.

Throughout Novice through Proficient Coursework, You May Find Students:

- Singing or playing various instruments (e.g. stringed/orchestral, brass or woodwind/band, percussion, guitar, piano, electronic instruments) while exploring different musical styles; responding to a leader or conductor when applicable.
- Planning and practicing for improvement of technique and skills.
- Writing, inventing (improvising), and revising (arranging) rhythmic and melodic phrases.
- Demonstrating comprehension of the language of music by reading, writing (music notation), listening to, and describing the components (analyzing) music.
- Analyzing/evaluating their own musical performances based on a set of self-developed criteria incorporating specific music terminology; connecting music to culture, history, and society as well as their own emotions and lived experiences.
Expectations for Students Completing Accomplished through Advanced Coursework:

- **Expression of Music (Perform/Present):** Perform accurately and expressively making interpretive and creative choices; incorporating practice and refinement processes to develop independent musicianship.

- **Creation of Music (Create):** Explore ways to create pieces of music through writing (composing), inventing (improvisation), and revising (arranging) existing music using current technology and notation.

- **Theory of Music (Know/Comprehend):** Apply knowledge about the language of music (music notation) by reading, performing, listening to, and describing music appropriate to an instrument or voice part; apply knowledge of musical structure and elements to understand how music is made.

- **Aesthetic Valuation of Music (Critique/Evaluate/Refine):** Interpret and describe music from a variety of styles, genres, and cultures using music terminology and criteria; explain the reasoning for personal preferences and describe how music is used in society and culture across time.

Throughout Accomplished through Advanced Coursework, You May Find Students:

- Singing or playing various instruments (e.g., stringed/orchestral, brass or woodwind/band, percussion, guitar, piano, electronic instruments) while exploring different musical styles; responding to a leader or conductor when applicable.

- Planning and practicing for improvement of technique and skills.

- Writing, inventing (improvising), and revising (arranging) rhythmic and melodic phrases.

- Demonstrating comprehension of the language of music by reading, writing (music notation), listening to, and describing the components (analyzing) music.

- Analyzing/evaluating their own musical performances based on a set of self-developed criteria incorporating specific music terminology.

- Connecting music to culture, history, and society as well as their own emotions and lived experiences.
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Physical Education

Physical education standards in Grades 6-12 focus on enhancing health-related components of fitness and skill-related components of fitness and personal activity. In each grade, the standards ask students to refine various movement concepts, assess personal behaviors, connect fitness development to body systems, and utilize safety procedures during physical activities. Additionally, in the high school years, students are asked to develop personal fitness plans to reflect on the benefits of committing to life-long health and wellness practices.

Expectations for High School Students:

- **Movement Competence and Understanding:** Participate at a competent level in a variety of lifelong physical activities; analyze the cognitive impact of movement; apply rules, principles, problem-solving skills, and concepts to traditional and nontraditional movement settings.

- **Physical and Personal Wellness:** Establish goals based on fitness assessment data, and develop, implement, achieve, and monitor an individual health and fitness plan; access community resources and participate in health-enhancing physical activities to maintain lifelong fitness.

- **Social and Emotional Wellness:** Demonstrate respect for individual differences in physical activity settings; collaborate, cooperate, and apply leadership skills to encourage responsible behavior in a group setting.

- **Prevention and Risk Management:** Assess the risks and safety factors involved in participation in physical activity; demonstrate knowledge of safety and emergency response procedures.

Throughout High School, You May Find Students:

- Applying advanced offensive, defensive, coaching, officiating, and transition strategies in sports and games.

- Evaluating psychological responses to physical activity and applying cognitive information to understand and enhance motor skill acquisition and performance.

- Creating and modifying practice and training plans based on evaluative feedback of skill acquisition and performance in a variety of lifelong activities.

- Examining fitness assessment data and developing a plan showing personal improvement toward fitness goals, including the monitoring of personal levels of fitness within each of the five health-related fitness components; accessing physical activity opportunities in the school and community.

- Utilizing safety concepts in a school or community fitness facility by inspecting and reporting unsafe equipment, as well as effectively spotting lifts and safely executing a variety of exercises.

- Analyzing principles from biomechanics (motion, resistance) and exercise physiology necessary for the safe performance of physical activities.
High School

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**Reading, Writing, and Communicating for High School**

The reading, writing, and communicating standards in the high 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. One noticeable change to the 2020 Colorado Academic Standards for high school is the banding of grade levels (i.e., 9-10 and 11-12). This change was made to create greater local flexibility for districts and schools in purchasing curriculum and resources in reading, writing, and communicating.

**Expectations for Ninth-Tenth Grade Students:**

- **Oral Expression and Listening:**
  - **In ninth grade,** students speak and make strategic use of multimedia to strengthen claims and add interest while delivering information, findings, and supporting evidence clearly, concisely, and logically; evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric; identify any deceptive reasoning or exaggerated evidence; evaluate the credibility of sources; collaborate in discussions by using credible resources, asking questions, and giving feedback to group members.
  - **In tenth grade,** students speak and make strategic use of multimedia to present information with a clear claim, supporting evidence, precise vocabulary, and a logical structure that is easy to follow; demonstrate credibility; evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric; identify deceptive reasoning or exaggerated evidence and source credibility; contribute to collaborative discussions; listen actively to other group members and pose questions, build on ideas, and demonstrate leadership in group settings.

- **Reading for All Purposes:**
  - **In ninth grade,** students read a variety of literary, informational, and argumentative texts; analyze themes, complex characters, plots, and central ideas, people, and events; analyze the meaning and impact of words on an author’s tone or message; examine how an author’s choice in sequencing a narrative creates suspense or tension; analyze how a text is structured to convey meaning; understand how a particular point of view is reflected in works of world literature; examine how different versions of an event or topic may be represented in different forms (drama, screen versions, visual arts).
  - **In tenth grade,** students read a variety of literary and nonfiction texts; summarize and analyze themes and central ideas by exploring complex characters, plots, and ideas; examine how an author’s sequencing creates mystery or tension; determine the meaning of words and phrases and their impact on understanding the text; articulate how a particular point of view is reflected in literary and nonfiction texts; explain how rhetoric and structure are used; analyze how different versions or interpretations of an event (or subject) may be presented through different forms (films, visual art, drama); use evidence from a text to support an analysis.

- **Writing and Composition:**
  - **In ninth grade,** students use technology to produce, publish, and update grammatically correct and organized writing that makes an argument or explains complex ideas supported by well-chosen facts and quotations; address counterarguments or opposing views; write narratives of real or imagined experiences by depicting a problem or observation, establishing one or multiple
points of view, and using narrative techniques like multiple plot lines, flashbacks, and effective figurative language.

- **In tenth grade**, students write for authentic, targeted audiences using technology to produce and publish a written piece that makes an effective argument or explains a complex idea; organize content around important connections and distinctions and use well-chosen facts and quotations; write narratives conveying real or imagined experiences by presenting a problem or observation, establishing one or multiple points of view, and using techniques like multiple plot lines.

- **Research Inquiry and Design:**
  - **In ninth grade**, students conduct short research projects to answer a question and generate additional focus questions; gather information from several sources; use search terms effectively; assess the credibility of sources; follow a standard format for citation; evaluate the soundness of reasoning and the relevance/sufficiency of evidence.
  - **In tenth grade**, students conduct short and long research projects to answer a question or solve a problem; use advanced search to find a variety of evidence (expert testimony, analogies, anecdotes, statistics) that has been evaluated for reliability and validity; avoid plagiarizing by following a standard format for citation; analyze the logic (including assumptions and beliefs) and the use of evidence by two or more authors who are presenting similar or opposing arguments.

**Throughout Ninth Grade, You May Find Students:**

- Engaging in inquiry around a question such as “What contributes to the effectiveness of a piece of writing and what gets in the way of effectiveness?”; reading relevant works of literature along with nonfiction writing to explore a complex issue; using collaborative groups (literature circles) to increase comprehension of complex texts; writing a literary analysis as part of a class “literary magazine” devoted to a theme or topic.
- Using close reading strategies (questioning, summarizing, making connections) to deepen understanding of challenging works of world literature; participating in discussions (Socratic seminar) that rely on inquiry and the use of textual evidence to foster thoughtful analysis.
- Studying a Shakespearean play and writing an analysis comparing themes, tone, or the language of the original against a contemporary interpretation.

**Throughout Tenth Grade, You May Find Students:**

- Reading and analyzing historical documents (speeches, laws, news accounts) as they relate to specific literary works written either during or about the time-period; working collaboratively to deepen their understanding of a text through group discussions (Socratic seminar, literature circles).
- Reading multiple texts by one author to examine how an author draws on personal experiences and cultural influences to write about contemporary themes and topics in a variety of ways (autobiographical, poetic, and fictional).
- Developing multimedia presentations to convey experiences or to express understandings of the world around them.
- Talking with peers and others about a draft piece of personal writing and revising their writing based on ideas and feedback from that conversation.

[Image]
Expectations for Eleventh-Twelfth Grade Students:

- **Oral Expression and Listening:**
  - *In eleventh grade,* students speak and make strategic use of multimedia to clarify information, strengthen claims, and add interest; present a distinct perspective so that listeners can follow the reasoning, build their understanding, and consider responses to alternative or opposing perspectives; accurately evaluate a speaker’s point of view, reasoning, use of evidence, and rhetoric; assess the ideas, word choice, points of emphasis, tone, credibility and accuracy of a speaker’s sources; participate in group discussions by being prepared, actively listening, and contributing to the discussion.
  - *In twelfth grade,* students develop and deliver a speech for a specific purpose and audience (making strategic use of multimedia and appropriate technical/specialized language); deliver information expressing a central idea, addressing opposing or alternate viewpoints, and conveying a clear and well-reasoned perspective; evaluate a speaker’s point of view, reasoning, use of evidence, and rhetoric; participate with peers in civil, democratic discussions to make decisions, set goals, and establish roles for group success.

- **Reading for All Purposes:**
  - *In eleventh grade,* students read a variety of texts, including foundational literary and historical texts from the 18th, 19th, and 20th centuries; summarize and analyze themes and central ideas; examine the impact of an author’s choices regarding complex story elements; determine the meaning of words and their impact on tone and message; understand an author’s point of view by determining what is stated (and meant) and by analyzing multiple versions of the text; analyze and evaluate reasoning in nonfiction and argumentative texts, explaining how an author’s use of structure and evidence contributes to the writing.
  - *In twelfth grade,* students read a variety of texts, including important texts from the 18th, 19th, and 20th centuries; summarize and analyze themes, plots, and characters in literature or central ideas, events, and people in nonfiction; compare/contrast text characteristics and authors’ perspectives in different texts; examine the impact of an author’s choices regarding story elements; evaluate how literary components impact meaning (symbolism, irony, extended metaphor); analyze argumentative and informational texts to understand how style, rhetoric, and content contribute to the text’s power and persuasiveness.

- **Writing and Composition:**
  - *In eleventh grade,* students write for authentic, targeted audiences and respond to ongoing feedback; make an effective argument or explain complex ideas; organize content and make important connections supported by significant facts, definitions, details, and quotations; use simile, metaphor and analogy to increase impact; write narratives to express real or imagined experiences and using narrative techniques to create an engaging story.
  - *In twelfth grade,* students write for targeted audiences, using technology and a range of elaboration techniques (questioning, comparing, connecting, interpreting, analyzing, or describing); argue a position by providing a sophisticated claim, addressing counter-arguments, developing a logical structure, and providing relevant evidence, facts, quotations, and examples; write narratives that develop context, character/narrator motivation, problem/conflict and resolution, and provide descriptive details to support and express a theme; manipulate elements of imagery, tone, and point of view.
• **Research Inquiry and Design:**
  
  o *In eleventh grade,* students conduct short and long research projects to answer a question or solve a problem; demonstrate understanding by bringing together authoritative sources through the use of advanced searches and by assessing the strengths and weaknesses of each source; integrate important information into a research project; avoid plagiarism and overreliance on one source; follow a standard format for citation; examine the reasoning in significant U.S. texts, including the application of constitutional principles and the use of argument and legal reasoning in works of public advocacy.
  
  o *In twelfth grade,* students define, narrow, and design research projects; bring together authoritative sources through the use of advanced searches (evaluating the strengths and weaknesses of each source); selectively integrate and synthesize information, avoid plagiarism and the over-reliance on one source, and follow a standard format for citation.

**Throughout Eleventh Grade You May Find Students:**

• Comparing past and contemporary author’s use of setting and characters to understand how societal influences impact an author’s writing.

• Using a variety of sources (academic, literary, historical) to research and evaluate claims made by others on a major social issue, such as censorship, in order to write a commentary that argues a specific stance; using evidence from research to support an argument, and using examples from past and/or current events and works of literature to illustrate and clarify an argument.

• Working with partners to develop texts (a class literary magazine, blog, video) to present multiple perspectives on an issue or theme.

**Throughout Twelfth Grade You May Find Students:**

• Creating digital portfolios that analyze and critique various works (poetry, visual art, editorials, historical and literary documents significant in U.S. history); producing original compositions of various genres or types of writing on a specific topic or theme relevant to various literature.

• Researching topics of personal relevance and interest and presenting findings to school or community audiences or to an online audience (via Prezi, VoiceThread, or other platforms).

• Working as a member of a collaborative team to analyze various literary and nonfiction works and to develop a whole-class presentation demonstrating multiple perspectives on a topic or theme; working in a team to generate a discussion forum (Socratic seminar, round-table discussion, debate teams) round relevant themes or topics.
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Science

The science standards for high 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 across multiple courses.

Physical Science: Students studying physical science continue to develop their understanding of the four core ideas in the discipline. These ideas include the most fundamental concepts from chemistry and physics, but are intended to leave room for expanded study in upper-level high school courses. The high school evidence outcomes in Physical Science build on the middle school ideas and skills and allow high school students to explain more in-depth phenomena central not only to the physical sciences, but to life and earth and space sciences as well. Students will study content across the following core ideas: (1) Structure and Properties of Matter, (2) Chemical Reactions, (3) Forces and Interactions, (4) Energy, and (5) Waves and Electromagnetic Energy. Students may encounter these standards across a variety of courses, including but not limited to Chemistry, Physics, and Physical Science.

Life Science: Students in high school life science courses will develop an understanding of key concepts that help them make sense of life science. The ideas are building upon students’ science understanding of disciplinary core ideas, science and engineering practices, and crosscutting concepts from earlier grades. There are five life science topics in high school: 1) Structure and Function, 2) Inheritance and Variation of Traits, 3) Matter and Energy in Organisms and Ecosystems, 4) Interdependent Relationships in Ecosystems, and 5) Natural Selection and Evolution. These include the most fundamental concepts in life science, but are intended to leave room for expanded study in upper-level high school courses. Students may encounter these standards across a variety of courses including, but not limited to Biology and Environmental Science.

Earth and Space Science: Students in high school continue to develop their understanding of the three disciplinary core ideas in the Earth and Space Sciences. The high school evidence outcomes in Earth and Space Science build on the middle school ideas and skills and allow high school students to explain more in-depth phenomena central not only to the earth and space sciences, but to life and physical sciences as well. These evidence outcomes blend the core ideas with scientific and engineering practices and crosscutting concepts to support students in developing usable knowledge to explain ideas across the science disciplines. Students will study content across the following core ideas: (1) Earth’s Place in the Universe, (2) Earth’s Systems, (3) Earth and Human Activity. Students may encounter these standards across a variety of courses including, but not limited to Environmental Science and Physics.
Expectations for Students in Physical Science:

- Understand that the sub-atomic structural model and interactions between electric charges at the atomic scale can be used to explain the structure and interactions of matter.
- Recognize that chemical processes, their rates, their outcomes, and whether or not energy is stored or released can be understood in terms of collisions of molecules, rearrangement of atoms, and changes in energy as determined by the properties of elements involved.
- Analyze how strong nuclear interaction in an atom provides the primary force that holds nuclei together. Nuclear processes including fusion, fission, and radioactive decay of unstable nuclei involve changes in nuclear binding energies.
- Explain how Newton’s second law and the conservation of momentum can be used to predict changes in the motion of macroscopic objects.
- Recognize that Forces at a distance are explained by fields that can transfer energy and can be described in terms of the arrangement and properties of the interacting objects and the distance between them.
- Recognize that energy is a quantitative property of a system that depends on the motion and interactions of matter and radiation within that system.
- Understand that energy cannot be created or destroyed, but it can be transported from one place to another and transferred between systems, and that although energy cannot be destroyed, it can be converted to less useful forms as it is captured, stored and transferred.
- Explain how force fields (gravitational, electric, and magnetic) contain energy and can transmit energy across space from one object to another.
- Explain how waves have characteristic properties and behaviors, and understand that both an electromagnetic wave model and a photon model explain features of electromagnetic radiation broadly and describe common applications of electromagnetic radiation.
- Understand how multiple technologies that are part of everyday experiences are based on waves and their interactions with matter

Throughout Physical Sciences You May Find Students:

- Using the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy levels of atoms.
- Constructing and revising an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.
- Refining the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.
- Developing models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.
- Applying scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.
- Planning and conducting an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.
• Creating a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.
• Developing and using a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.
• Using mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.
• Communicating technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.

Expectations for Students in Life Science:

• Understand that DNA codes for the complex hierarchical organization of systems that enable life’s functions and that growth and division of cells in complex organisms occurs by mitosis, which differentiates specific cell types.
• Recognize that organisms use matter and energy to live and grow, and that organisms interact with the living and nonliving components of the environment to obtain matter and energy. Explain how matter and energy which are necessary for life, are conserved as they move through ecosystems.
• Understand how a complex set of interactions determine how ecosystems respond to disturbances, and how organisms interact in groups to benefit the species.
• Understand how the characteristics of one generation are dependent upon the genetic information inherited from previous generations, and that variation between individual’s results from genetic and environmental factors.
• Understand how evidence of common ancestry and diversity between species can be determined by examining variations including genetic, anatomical and physiological differences, and that genetic variation among organisms affects survival and reproduction.
• Recognize that environment influences survival and reproduction of organisms over multiple generations, and that as humans, we have complex interactions with ecosystems and have the ability to influence biodiversity on the planet.

Throughout Life Science You May Find Students:

• Analyzing and interpreting data on genes; demonstrating how DNA processes are the same in all organisms; developing, communicating, and justifying an explanation of how cells form specialized tissues.
• Using a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
• Planning and conducting an investigation to provide evidence that feedback mechanisms maintain homeostasis.
• Developing an explanation that shows how ecosystems follow the laws of conservation of matter and energy; analyzing how energy flows through trophic levels (food webs); describing how various cycles work (carbon, nitrogen, phosphorus, and water).
• Using mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
• Evaluating claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

Expectations for Students in Earth and Space Science:

• Recognize that all stars, including the sun, undergo stellar evolution, and the study of stars’ light spectra and brightness is used to identify compositional elements of stars, their movements, and their distances from Earth.
• Develop explanations of and predictions about the motions of orbiting objects are described by the laws of physics.
• Understand that the rock record resulting from tectonic and other geoscience processes as well as objects from the solar system can provide evidence of Earth’s early history and the relative ages of major geologic formations.
• Recognize that Earth’s systems, being dynamic and interacting, cause feedback effects that can increase or decrease the original changes, and these effects occur on different time scales, from sudden (e.g., volcanic ash clouds) to intermediate (ice ages) to very long-term tectonic cycles.
• Understand that plate tectonics can be viewed as the surface expression of mantle convection, which is driven by heat from radioactive decay within Earth’s crust and mantle.
• Explain how the planet’s dynamics are greatly influenced by water’s unique chemical and physical properties; and how the biosphere and Earth’s other systems have many interconnections that cause a continual co-evolution of Earth’s surface and life on it.
• Understand the role of radiation from the sun and its interactions with the atmosphere, ocean, and land are the foundation for the global climate system. Global climate models are used to predict future changes, including changes influenced by human behavior and natural factors.
• Explain how resource availability has guided the development of human society and use of natural resources has associated costs, risks, and benefits.
• Recognize that natural hazards and other geological events have shaped the course of human history at local, regional, and global scales.
• Understand that the sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources, including the development of technologies.
• Understand how Global climate models are used to predict future climate change continue to improve our understanding of the impact of human activities on the global climate system.

Throughout Earth and Space Science You May Find Students:

• Developing a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun’s core to release energy that eventually reaches Earth in the form of radiation.
• Evaluating evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
• Using a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate.
• Planning and conducting an investigation of the properties of water and its effects on Earth materials and surface processes.

• Evaluating competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

• Evaluating or refining a technological solution that reduces impacts of human activities on natural systems.
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Social Studies

Building on the social studies skills developed throughout the elementary and middle school grades, students in high school study world history (Renaissance to the present), world geography, United States history (Reconstruction to the present), economics (including personal financial literacy), and United States government. Throughout high school, students investigate historical events, examine geographic features and resources, consider economic decision-making processes, and analyze the rights, roles, and responsibilities of citizens.

Expectations for U.S. History Students:

- Articulate (write and speak) about ideas, events, and historical periods that shaped United States History (from Reconstruction to the present); use the historical method of inquiry to formulate compelling questions; evaluate a variety of primary and secondary sources; identify patterns of continuity and change over time for significant historical periods; discuss the ideas that shape(d) people and places.
- Use maps and other geographic tools to explain the interactions of people and places; explain how places and regions are connected.
- Trace the expansion of political engagement through civil rights movements and issues of unity and diversity; explain how government structures and policies impact societies and citizens.

Throughout U.S. History You May Find Students:

- Analyzing historical sources for historical context (When was the source created? What circumstances led to the source’s creation? Where was the source created?); identifying a document’s point of view (Who created the document? How can you analyze the perspective for the possible biases of its creator?); researching topics using a variety of sources; writing historical arguments using appropriate evidence and analysis; considering the differences between fact and historical interpretation.
- Tracing continuity and change in eras and across locations (foreign policy issues, technological revolutions); connecting causes and effects of significant events in U.S. History (global conflicts, the Great Depression, civil rights movements,); considering the ideas, motivations, complexity, and outcomes of historical events (voting rights, anti-discrimination policies); discussing issues that have unified groups as well as issues that have separated groups.
- Discussing the history of political thought, theory and actions (conservatism, liberalism, fundamentalism) and the effects of political thought on individuals, businesses, and societies; analyzing the roles of conflict, compromise, and cooperation on national unity and diversity (suffrage, civil rights); analyzing the role of ideas in American history (populism, progressivism, isolationism); identifying the development and impact of the arts and literature on the culture of the United States (Harlem Renaissance).
- Tracing the immigration and migration patterns of different groups in the United States from Reconstruction to present day (urbanization and suburbanization).
- Talking and writing about the causes and effects of major economic fluctuations (cycles of boom and bust); evaluating ideas of economic thinkers (Keynes, Friedman); examining important inventions and entrepreneurs.
- Discussing the Constitution as a flexible document; investigating American foreign policy; outlining the growth and limits of executive power (New Deal, War Powers Act, U.S.A. PATRIOT Act); examining Supreme Court cases that extend the scope of government power and affect the rights of the individual (Plessy v. Ferguson, Brown v. Board of Education).
Expectations for World History Students:

- Articulate (write and speak) about ideas, events, and historical periods that shaped World History (from the Renaissance to the present); use the historical method of inquiry to formulate compelling questions; evaluate a variety of primary and secondary sources; identify patterns of continuity and change over time for significant historical periods within and among cultures and societies; discuss world religions and other ideas that shape (d) people and places.
- Use maps and other geographic tools to explain the interactions of people and places; explain how places and regions are connected.
- Trace the formation of different forms of governments; explain how government structures and policies impact societies and citizens.

Throughout World History You May Find Students:

- Analyzing primary and secondary sources to formulate historical arguments; considering continuity and change within and among cultures and societies; connecting the causes and effects of significant events, major scientific, and technological innovations (Industrial Revolution); considering events with their complex motivations, ideas, and results (the World Wars); discussing issues that unify cultural/national groups (independence movements/decolonization), and issues that divide or separate people (the Holocaust and other genocides); discussing the historical development and contemporary impact of philosophical movements and major world religions (for example, the Enlightenment, Buddhism, Christianity, Hinduism, Islam, Judaism, Sikhism and Taoism).
- Using maps and other geographic tools to explain the growing interconnectedness of the world’s population (emigration and immigration patterns); interpreting how the environment shapes societies and countries throughout world history; relating how the uneven distribution of resources in the world can result in conflict, competition, or cooperation.
- Explaining how the economic role of government within different countries affects decisions regarding production and distribution of goods (socialism, communism, and market capitalism); analyzing the opportunity costs of economic choices throughout modern world history.
- Examining the political theories that contributed to the foundation and development of various governments; evaluating the interactions of various governments and their leaders (the development of fascist dictators before World War II); comparing and contrasting the functions of different systems of government (monarchies, democracies, dictatorships).
Expectations for Geography Students:

- Demonstrate a spatial understanding of the world (the patterns and organization of people, places, and environments).
- Evaluate primary and secondary sources through a geographer’s point of view to critically analyze and interpret maps and data.
- Explain and interpret geographic characteristics (mountains, oceans, countries, states) that influence the interaction of people, places, and environments using different types of maps and geographic tools.
- Assess and evaluate the interconnected and interdependent nature of the world, its people, and places; analyze human/environmental interactions and explain the impact on global interdependence.

Throughout Geography You May Find Students:

- Using maps, graphs, tables, charts, and GIS systems to gather data and analyze information about the physical and human features of the world.
- Researching and interpreting multiple viewpoints on problems and policies regarding the use of Earth’s resources including the development of possible solutions to cultural and environmental issues (sustainability, natural hazards and disasters, prosperity and poverty, and resource use).
- Predicting how human activities will shape the Earth’s surface.
- Examining ways that people cooperate and compete for use of Earth’s resources.
- Asking and answering geographic questions, proposing solutions, and analyzing information about the distribution of resources in the world.
- Explaining how control of resources can lead to conflict, competition, and cooperation.
- Researching cultural diffusion, population issues, and environmental issues and discussing the relationship between humans and the physical environment.
- Analyzing patterns of movement, population distribution, and the causes and effects of migration.
Expectations for Economics & Personal Financial Literacy Students:

- Economics: Explain that the scarcity and allocation of natural, human, and capital resources requires individuals, businesses, and governments to make choices. Understand how government policies, competition, and international trade affect the price of goods and services exchanged in the marketplace.
- Personal Financial Literacy: Examine the four parts of the budgeting process. This includes factors that impact an individual’s earning capability, investment options, consumer skills, and risk management strategies.

Throughout Economics & Personal Financial Literacy You May Find Students:

- Explaining that choices made by individuals, businesses, and government are influenced by incentives and policies.
- Explaining how choices incur opportunity costs.
- Analyzing policies aimed at stabilizing the economy (fiscal policy by the government and monetary policy by the Federal Reserve).
- Analyzing the role of government in a market economy.
- Contrasting different economic systems (capitalism, socialism, communism, mixed market system).
- Defining characteristics of market structures (pure competition, monopolistic competition, monopoly).
- Exploring the implications of international trade.
- Considering decisions and opportunities consumers face in order to become financially capable individuals, including income sources; investment choices; tax liabilities; insurance benefits; and spending, saving and borrowing options.
Expectations for Civics Students:

- Gather information about and engage civically to address issues at local, state, tribal, and national levels.
- Describe the foundation of government (rule of law, common good) and its structures (Legislative, Executive, Judicial, Federal, and State) and functions.
- Understand how foreign and domestic public policy is made at local, state, tribal, and national levels.
- Gather and analyze data from multiple sources to look for patterns and create hypotheses regarding various forms of government.

Throughout Civics You May Find Students:

- Researching current issues (immigration, education, civil rights) for the purpose of influencing public policy; identifying which level of government is appropriate to communicate with regarding political issues; evaluating the accuracy and perspective of various media sources and describing how media acts as a check on governmental practices.
- Examining political philosophers related to the origins and structure of government; analyzing competing democratic values (freedom vs. security, individual rights vs. common good).
- Explaining how the founding documents (Declaration of Independence, Constitution, Bill of Rights) embody the principles of democracy and values such as freedom, security, equality, and individual rights and responsibilities.
- Analyzing options for participating in local, state, tribal, and national policy development (initiatives, voting, protest, referendum, party participation, campaigns).
- Assessing the effectiveness of the justice system, executive actions, and the legislative process in preserving and promoting the ideals of the U.S. system of government; using court decisions and legislative actions to trace the development of the rights and ideals of America’s representative democracy.
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Visual Arts

Colorado high school art programs have varying resources and curricular options for students to investigate the many areas of the visual arts (including but not limited to drawing, painting, photography, sculpture, art history, digital and graphic arts, design, ceramics, fibers, metals, woodworking, performance and installation art, or career and technical education). Whatever the course design, the visual arts standards in the high school years focus on a deeper understanding of the intent and purpose of art and the art-making process for the culture and the individual. Students “tell their stories” through art making and the study of art, learning advanced studio processes, and investigating tools and materials that support their own artistic vision. Reflecting on and documenting the art-making process is an essential element of the visual arts standards in high school. Students examine their art-making practice in relationship to other makers (both past and current) and cultures. Career opportunities and the arts’ relationship to society (technology, media, issue-based/conceptual art, art appreciation) are also explored.

Expectations for High School Students:

- Demonstrate complex skills that utilize the theories and language of art to communicate meaning by creating and analyzing works of art; recognize the complexity of art across time and cultures.
- Reflect on and document the art-making process with technical proficiency by ensuring appropriate images of art and the art-making process are effectively presented and opinions and decisions are supported by research.
- Demonstrate complex ideas (concepts) in a work of art using traditional and non-traditional materials as well as new technologies; combine and refine art materials and ideas in new and unusual ways.
- Explain and consider the value and purpose of art based on historical significance, cultural context, and artistic (personal) intent.

Throughout High School, You May Find Students:

- Using sketches, plans, and models to create and/or design a functioning work of art.
- Creating works of art representing traditional and non-traditional subject matter that use new and traditional media.
- Debating changing ideas and values about art and design created throughout time and across various cultures.
- Critiquing works of art using a process of description, analysis, interpretation, and evaluation.
- Documenting and evaluating art and the art-making process to assess completed artwork and inform new works of art.
- Discussing a personal belief statement about art and art making.
- Using materials, tools, technology, and processes in new and unusual ways.
- Explaining the influences that shape the creation of art (societal issues, personal preferences or experiences, economic needs).
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World Languages

The world languages standards in high school create a roadmap to guide Grade 9-12 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, comparing both the nature of language and the nature of culture with their own language and the one being learned and with 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 school districts have multiple entry points. Both the length and the type of program design impact both language acquisition and proficiency level for students.

Expectations for Novice-Proficiency Ranges Students:

- Communicate in spontaneous spoken, written, or signed conversations on both very familiar and everyday topics using a variety of practiced or memorized words, phrases, simple sentences, and questions in the **Interpersonal Mode**.
- Identify the general topic and some basic information in both very familiar and everyday contexts by recognizing practiced or memorized words, phrases, and simple sentences in texts that are spoken, written, or signed in the **Interpretive Mode**.
- Present information on both very familiar and everyday topics using a variety of practiced or memorized words, phrases, and simple sentences through spoken, written, or signed language in the **Presentational Mode**.

Throughout the Novice-Proficiency Ranges, You May Find Students:

- Exchanging text messages with my friend to suggest an activity for the weekend.
- Asking and answering questions and carrying on discussions related to various subjects (history, math, science, art, business, language, or literature).
- Using knowledge from science and health classes to compare healthy eating recommendations using food pyramids or the equivalents from different countries.
- Responding to simple questions based on graphs or visuals that provide information containing numbers or statistics.
- Using authentic resources to plan a trip to countries where the target language is spoken.
- Writing the sequence of events from a story either read or viewed.
- Orally describing a simple process such as how to solve a math problem.
Expectations for Intermediate-Proficiency Ranges Students:

- Participate in spontaneous spoken, written, or signed conversations on familiar topics, creating sentences and series of sentences to ask and answer a variety of questions in the **Interpersonal Mode**.
- Understand the main idea and some pieces of information on familiar topics from sentences and a series of connected sentences within texts that are spoken, written, or signed in the **Interpretive Mode**.
- Communicate information, make presentations, and express personal thoughts about familiar topics, using sentences and a series of connected sentences through spoken, written, or signed language in the **Presentational Mode**.

Throughout the Intermediate-Proficiency Ranges, You May Find Students:

- Discussing information about career pathways and research on how knowing more than more language enhances career possibilities.
- Beginning to adjust language, behaviors, and messages to acknowledge audiences from different cultural backgrounds.
- Developing or proposing solutions to issues and problems related to school, community, or world events (orally, signed or using a written document or multimedia tool).
- Asking and answering questions and carrying on discussions related to various subjects (history, math, science, art, business, language, or literature).
- Comparing how different time frames (present, past, future tenses) are expressed in the target language and their native language.
- Describing the main themes and details on topics from other subjects and products of the targets cultures as presented on TV, radio, podcast, videos, news or live presentations.
- Comparing attitudes, cultural perspectives, and/or reactions to current events of global importance in countries where the target language is spoken.
- Understanding the directions of a GPS to a familiar location.
- Recognizing that significant differences in behaviors exist among cultures, using appropriate learned behaviors, and avoiding major social blunders when using the target language.
Expectations for Advanced-Proficiency Ranges Students:

- Maintain spontaneous spoken, written, or signed conversations and discussions across various time frames on familiar, as well as unfamiliar, concrete topics using a series of connected sentences and probing questions in the **Interpersonal Mode**.
- Understand the main message and supporting details on a wide variety of familiar and general interest topics across various time frames from complex, organized texts that are spoken, written, or signed in the **Interpretive Mode**.
- Deliver sophisticated and articulate presentations on a wide range of global issues and highly abstract concepts, fully adapting to the cultural context of the audience, using spoken, written, or signed language in the **Presentational Mode**.

Throughout the Advanced-Proficiency Ranges, You May Find Students:

- Exchanging, supporting, and discussing personal opinions and individual perspectives with peers and speakers of the target language on a variety of topics dealing with contemporary or historical issues.
- Explaining issues of public and community interest, including different viewpoints.
- Writing a critical analysis of a film or novel from the target country where the language is spoken.
- Interacting and negotiating to resolve an unexpected complication in a situation that is generally unfamiliar.
- Researching an issue of global importance in order to provide insights from the perspective of the target cultures.
- Adjusting language, behaviors, and messages to acknowledge audiences from different cultural backgrounds.
- Delivering cohesive presentations on a variety of complex concrete topics related to community interests and some specialized fields.