



———— A Family's Guide ————

TO STANDARDS & REPORT CARDS

———— Eighth Grade ————

Adams12 
Five Star Schools



A Family's Guide to Standards and Report Cards

EIGHTH GRADE



Working Together

To support families in realizing the goals of the Colorado Academic Standards, this document provides an overview of the learning expectations for eighth grade. This guide summarizes specific grade-level standards and indicators used for determining progress within each content area in Adams 12 Five Star Schools. The district provides this information as a tool to help families support each student's learning.

The Purpose of Standards

Created by Coloradans for Colorado students, the Colorado Academic Standards provide a grade-by-grade road map to help ensure that students are successful in college, careers, and life. The standards define what students will learn in multiple content areas – emphasizing critical-thinking, creativity, problem solving, collaboration, and communication as important life skills in the 21st century.

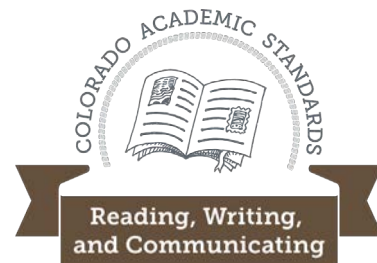
The Purpose of Report Cards

Adams 12 Five Star Schools' elementary report cards provide information about each student's progress toward meeting grade-level standards across seven content areas: English Language Arts/Literacy, Mathematics, Science and Social Studies. Additional comments from the student's teachers may also be included. A report card is sent home at the end of each semester, in January and May. Please know that the report card is designed to describe a student's overall progress toward grade-level standards and expectations. A report card should not serve as the only communication between the school and parents. The Five Star District believes in the importance of maintaining open, ongoing communication with all parents and guardians. Families are strongly encouraged to communicate with teachers throughout the school year to ensure that there is a strong bond and partnership between home and school.

Eighth Grade

English Language Arts

The bold headings below summarize broad areas of *English Language Arts* studied in eighth grade, but do not describe the details of the curriculum.



Reading

With grade-level text, the student demonstrates the ability to...

- comprehend and draw evidence from literary and informational texts.
- construct and support accurate analysis of text.
- use context to determine the meaning of words and phrases.
- analyze the impact of an author's choices, including analogies or allusions, on meaning and tone,
- cite the most supportive textual evidence when drawing sound inferences from text.
- show full understanding of text when referring to explicit details and examples.
- evaluate the construction of arguments and the use of non-print mediums

Writing

While writing narrative, informational, and argumentative pieces, the student demonstrates the ability to...

- develop a claim, topic, and/or narrative elements in a manner appropriate to the task, purpose, and audience.
- use reasoning, details, text-based evidence, and/or description.
- produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.
- use transitions to clarify ideas and create cohesion.
- include precise language and vocabulary to convey experiences, clarify ideas and create cohesion.
- draw evidence from literary or informational texts to support analysis, reflection, and research.
- establish and maintain an effective style, while attending to the norms and conventions of the discipline.
- demonstrate command of the conventions of Standard English.

Speaking and Listening

When engaging in a range of discussions on grade-level topics and texts, the student demonstrates the ability to...

- engage effectively in a range of collaborative discussions.
- interpret information presented in diverse media and formats.
- delineate a speaker's argument and specific claims.
- use multimedia components to present claims and findings.
- adapt speech to a variety of contexts and tasks.

Language

When writing and speaking, the student demonstrates...

- command of grade-level conventions of Standard English.
- understanding of multiple-meaning words and phrases based on grade 8 reading and content, figurative language, word relationships, and nuances in word meanings.

Middle School English Language Arts Rubric

The rubric below provides a general description of a student's literacy proficiency in terms of the skills specified in the grade-level standards as demonstrated through multiple assessments. NOTE: Students must be able to demonstrate literacy skills while comprehending and/or composing a variety of grade-level literary and nonfiction texts.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
<p>The student independently demonstrates the skills of the standards with above grade-level texts.</p> <p>OR</p> <p>The student demonstrates skills beyond grade-level standards with grade-level texts.</p>	<p>The student independently demonstrates the skills of the standards with grade-level texts.</p>	<p>The student independently demonstrates the skills of the standards with below grade-level texts.</p> <p>OR</p> <p>With support, the student demonstrates the skills of the standards with grade-level texts.</p>	<p>The student independently demonstrates limited understanding of the skills of the standards with below grade-level texts.</p> <p>OR</p> <p>With significant support, the student demonstrates limited understanding of the skills of the standards with grade-level texts.</p>

Eighth Grade Mathematics

The bold headings below summarize eighth grade math expectations but do not describe details of the curriculum. The Number System, Expressions and Equations, Functions, Geometry, and Statistics and Probability summarize the broad areas of *Mathematics Content Standards* studied in eighth grade Math. Mathematical Communication and Procedural Fluency represent areas of expertise to be developed in support of the *Standards for Mathematical Practice*.



The Number System

The student will...

- know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations

The student will...

- work with radicals and integer exponents.
- understand the connections between proportional relationships, lines, and linear equations.
- analyze and solve linear equations and systems of linear equations.

Functions

The student will...

- define, evaluate, and compare functions.
- use functions to model relationships between quantities.

Geometry

The student will...

- understand congruence and similarity using physical models, transparencies, or geometry software.
- understand and apply the Pythagorean Theorem.
- solve real-world and mathematical problems involving volume of cylinders, cones and spheres.

Statistics and Probability

The student will...

- investigate patterns of association in bivariate data.

Mathematical Communication

The student will...

- explain mathematical concepts, skills and applications using appropriate mathematical vocabulary.
- construct logical, complete, and concise mathematical arguments.

Procedural Fluency

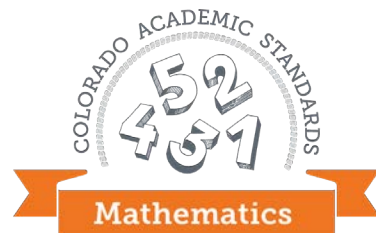
The student will...

- organize and carry out procedural, numeric and symbolic work accurately, efficiently and flexibly.
- select and apply appropriate and efficient strategies to make deductions and solve problems.

Mathematics rubrics on page 5.

Eighth Grade Honors Mathematics

The bold headings below summarize eighth grade honors math expectations but do not describe details of the curriculum. The Number System, Expressions and Equations, Functions, Geometry, and Statistics and Probability summarize the broad areas of *Mathematics Content Standards* studied in eighth grade honors math. Mathematical Communication and Procedural Fluency represent areas of expertise to be developed in support of the *Standards for Mathematical Practice*.



The Number System

The student will...

- know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations

The student will...

- work with radicals and integer exponents.
- understand the connections between proportional relationships, lines, and linear equations.
- analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

The student will...

- define, evaluate, and compare functions.
- use functions to model relationships between quantities.
- construct and apply exponential models.
- interpret quadratic functions.

Geometry

The student will...

- understand congruence and similarity using physical models, transparencies, or geometry software.
- understand and apply the Pythagorean Theorem.
- solve real-world and mathematical problems involving volume of cylinders, cones and spheres.

Statistics and Probability

The student will...

- investigate patterns of association in bivariate data.

Mathematical Communication

The student will...

- explain mathematical concepts, skills and applications using appropriate mathematical vocabulary.
- construct logical, complete, and concise mathematical arguments.

Procedural Fluency

The student will...

- organize and carry out procedural, numeric and symbolic work accurately, efficiently and flexibly.
- select and apply appropriate and efficient strategies to make deductions and solve problems.

Mathematics rubrics on page 5.



Mathematics

Eighth Grade Mathematics Rubrics

Middle School Mathematics Content Rubric

The rubric below provides a general description of student proficiency with mathematics content standards.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
<p>The student uses appropriate mathematical concepts and skills to solve application problems in both familiar and unfamiliar situations with limited scaffolds & supports.</p> <p>AND/OR</p> <p>The student solves problems that require connections among multiple concepts without scaffolded prompts.</p>	<p>The student uses appropriate mathematical concepts and skills to solve application problems in familiar situations with scaffolds & support.</p> <p>AND/OR</p> <p>The student solves problems that require connections among multiple concepts with scaffolded prompts.</p>	<p>The student uses appropriate mathematical concepts and skills to solve routine problems but is unsuccessful with applications to real life contexts.</p> <p>AND/OR</p> <p>The student solves problems involving concepts in isolation.</p>	<p>The student demonstrates limited success in the use of appropriate mathematical concepts and skills to solve routine problems and applications to real life contexts.</p> <p>AND/OR</p> <p>The student has limited success solving problems with concepts in isolation.</p>

Middle School Mathematics Communication Rubric

Mathematics Communication at the middle school level addresses a student's ability to explain, construct, and critique mathematical reasoning using precise and accurate mathematical language.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
<p>The student demonstrates the ability to explain, construct and critique mathematical reasoning with concise, detailed, logical and complete arguments.</p> <p>The student demonstrates the ability to effectively communicate conceptual understanding and contextual interpretation of results.</p> <p>The student consistently uses accurate mathematical content language with sophistication appropriate to prompt.</p>	<p>Student explanations are complete and logical but may lack details, and/or coherent flow in presentation.</p> <p>Conceptual or contextual understanding is inferred but not explicit.</p> <p>The student is accurate but inconsistent in the use of mathematical content language appropriate to prompt.</p>	<p>Student explanations are fragmented with omissions in logic, details or coherent flow.</p> <p>Concept/context explanations are vague, incomplete or inconsistent.</p> <p>Basic mathematical language is present but not at levels appropriate to the prompt.</p>	<p>Student provides only superficial explanations or explanations that do not match solutions.</p> <p>Concept/context connections are absent or inappropriate to prompt.</p> <p>Mathematical language is missing or generally inappropriate to the task.</p>

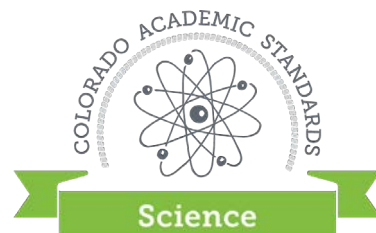
Middle School Mathematics Procedural Fluency Rubric

Procedural Fluency at the middle school level addresses a student's ability to select and execute appropriate procedural aspects of mathematics work in an organized and efficient manner.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
<p>The student demonstrates fluency in carrying out procedures flexibly, accurately, efficiently and with clarity in organization.</p> <p>The student consistently selects and applies appropriate and efficient strategies to make deductions and solve problems.</p>	<p>Student procedural work is appropriate to task but may contain minor errors in execution or organization.</p> <p>The student often selects and applies appropriate and efficient strategies to make deductions and solve problems.</p>	<p>Student procedural work lacks coherent organization, omits key steps or contains multiple errors in execution.</p> <p>The student selects and applies rote strategies to make deductions and solve problems.</p>	<p>Student procedural work is incoherent, missing or inappropriate to task.</p> <p>The student demonstrates limited success in applying rote strategies to make deductions and solve problems.</p>

Eighth Grade Science

The bold headings below summarize the three strands that comprise *Science Content Standards* in eighth grade and the *Science Practices* necessary for the advancement of science in our society. Skills critical to success in science include **observing, collecting, analyzing and interpreting evidence.**



Life

Using science skills, the student demonstrates the ability to...

- communicate that human activities alter the environment deliberately or inadvertently.

Physical

Using science skills, the student demonstrates the ability to...

- gather, analyze, model, and interpret data to describe the different forms of energy and energy transfer.
- compare and contrast the common characteristics and unique properties of various waves.
- plan an investigation to provide evidence that a change in an object's motion depends on the sum of the forces on the object and the mass of the objects.
- construct an evidence based argument that gravity is an attractive force dependent on mass and is responsible for motion in orbits.
- distinguish between physical and chemical changes and provide a scientific explanation that mass is conserved in both.

Earth

Using science skills, the student demonstrates the ability to...

- develop and use a model of the Earth-Sun-Moon system to describe cyclic patterns of natural phenomenon.
- utilize a scale model to demonstrate the relationships, characteristics, and motion of objects in our solar system.
- explain how Earth's features and energy transfer result in Earth's weather and climate.
- develop and use models to predict short term and long term changes in weather and climate.

Science Practices

The student demonstrates the ability to...

- analyze and interpret data.
- create and evaluate models.
- ask questions to further their understanding and determine which questions are testable.
- plan and carry out scientific investigations.
- communicate their scientific thinking
 - cite specific textual evidence to support analysis of science texts.
 - analyze symbols, key terms, text structure and author's purpose when reading a text.
 - integrate quantitative and technical information using words and visual representations (graphs, diagrams, pictures).
 - write informational explanations and arguments focused on discipline specific content.

Middle School Science Rubric

The rubric below provides a general description of student work with science standards at four levels of proficiency. Note: Students must be able to demonstrate both skills and conceptual understanding.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
Student consistently and independently applies standards based skills and understanding of concepts to new or novel situations.	Student consistently and independently applies standards based skills and understanding of concepts in familiar situations.	Student inconsistently applies standards based skills and/or understanding of concepts in familiar situations	Student demonstrates limited ability to apply standards based skills and/or understanding of concepts.

Eighth Grade Social Studies

The bold headings below summarize eighth grade expectations, but do not describe the details of the curriculum. The content standards of history, geography, economics and civics are from the *Colorado Academic Standards*. The Connected Literacy Standards should be used and assessed in conjunction with Social Studies content standards.



History

The student demonstrates the ability to...

- analyze evidence from multiple sources about specific events in United States history.
- construct and support a written historical argument using historical sources.
- determine and explain the historical context of key people, ideas, and events from the origins of the American Revolution through Reconstruction.

Geography

The student demonstrates the ability to...

- describe settlements in relationship to physical attributes.
- compare how differing geographic perspectives apply to a historic issue.
- interpret from a geographic perspective the expansion of the United States.

Economics

The student demonstrates the ability to...

- describe the factors that lead to comparative and absolute advantage in trade.
- explain why nations often restrict trade by using quotas, tariffs, and non-tariff barriers.
- explain factors that have impacted borrowing and investing over time.
- analyze the impact of taxes on the people of the United States over time.

Civics

The student demonstrates the ability to...

- describe examples of citizens and groups who have influenced change in United States government and politics.
- examine ways citizens may effectively voice opinions, monitor government, and bring about change nationally.
- explain the role and importance of the Constitution.
- discuss the tensions between individual rights, state law, and national law.

Connected Literacy Standards

The student demonstrates the following skills in concert with the content standards above:

- cite key details to support analysis in primary and secondary sources.
- identify point of view in primary and secondary sources.
- integrate information from multiple texts on the same topic.
- write arguments focused on discipline specific content.
- conduct short content specific research projects.

Middle School Social Studies Rubric

The rubric below provides a general description of student proficiency with social studies content standards. Note: Students must be able to both demonstrate appropriate use of social studies concepts and skills and apply the tools of a historian, geographer, economist, and political scientist.

4 ADVANCED UNDERSTANDING	3 MEETS THE STANDARD	2 APPROACHING	1 DOES NOT MEET
The student is able to independently apply grade level standards to new or unfamiliar situations.	The student consistently and independently applies grade level standards in familiar contexts.	The student is inconsistent or requires support in applying grade level standards in familiar contexts.	The student is unable to apply grade level standards in familiar contexts.



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