

# 4th Grade Learner Expectations for the 2nd Trimester



As a result of their schooling, students will be able to:

## Reading, Writing, and Communicating

- **Effectively discusses content using speaking and listening skills**
  - Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - Follow agreed-upon rules for discussions and carry out assigned roles.
- **Reads and understands grade level literature**
  - Determine theme of a story, drama, or poem from details in the text; summarize the text.
  - Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).
  - Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.
  - Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest in stories, myths, and traditional literature from different cultures).
- **Reads and understands grade level informational texts**
  - Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
  - Explain how an author uses reasons and evidence to support particular points in a text.
  - Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.
- **Uses strategies to read complex words and find their meaning**
  - Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression.
  - Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
  - Read and understand words with common prefixes (un-, re-, dis-) and derivational suffixes (-ful, -ly, -ness).
  - Infer meaning of words using explanations offered within a text.
  - Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.
  - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).
- **Uses the writing process to create stories and persuasive pieces**
  - Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
  - Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.
  - Provide reasons that are supported by facts and details.
  - Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
  - Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

- Use dialogue and description to develop experiences and events or show the responses of characters to situations.
- Use concrete words and phrases and sensory details to convey experiences and events precisely.
- **Uses the writing process and sources to create informational texts**
  - Organize relevant ideas and details to convey a central idea or prove a point.
- **Uses correct grade level grammar, punctuation, and spelling**
  - Choose punctuation for effect.
  - Use correct format (indenting paragraphs, parts of a letter, poem, etc.) for intended purpose.
  - Form and use prepositional phrases.
  - Use commas and quotation marks to mark direct speech and quotations from a text.
- **Conducts and presents research from multiple sources**
  - Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - Apply grade 4 Reading standards to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").
- **Builds reasoning and problem solving skills**
  - Identify the key concepts and ideas they and others use.

## Math

- **Use the four operations with whole numbers to solve problems**
  - Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.
  - Represent multistep word problems with equations using a variable to represent the unknown quantity.
  - Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
  - Using the four operations analyze the relationship between choice and opportunity cost (PFL)
  - Use a symbol to represent and find an unknown quantity in a problem situation
  - Find the unknown in simple equations
- **Gain familiarity with factors, prime, and composite numbers**
  - No evidence outcomes mastered during trimester for this indicator.
- **Generate and analyze patterns**
  - No evidence outcomes mastered during trimester for this indicator.
- **Generalize place value understanding for multi-digit whole numbers**
  - No evidence outcomes mastered during trimester for this indicator.
- **Use properties of operations to perform multi-digit arithmetic**
  - Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.
  - Illustrate and explain division calculation by using equations, rectangular arrays, and/or area models.
- **Extend understanding of fraction equivalence and ordering**
  - Explain equivalence of fractions using drawings and models.
  - Use the principle of fraction equivalence to recognize and generate equivalent fractions.
  - Compare two fractions with different numerators and different denominators, and justify the conclusions.
- **Perform operations with fractions and compare decimals**
  - Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
  - Compose and decompose fractions as sums and differences of fractions with the same denominator in more than one way and justify with visual models.

- Add and subtract mixed numbers with like denominators.
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
- Express a fraction  $a/b$  as a multiple of  $1/b$ .
- Use a visual fraction model to express  $a/b$  as a multiple of  $1/b$ , and apply to multiplication of whole number by a fraction.
- Solve word problems involving multiplication of a fraction by a whole number.
- **Solve problems involving measurement and conversion of measurements**
  - Know relative sizes of time measurement units within one system of units including hr, min, sec.
  - Within a single system of measurement (time), express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
  - Use the four operations to solve word problems involving intervals of time and money and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
  - Represent (time) measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
  - Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml.
  - Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
  - Use the four operations to solve word problems involving distances, liquid volumes, and masses of objects, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
  - Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- **Represent and interpret data**
  - Make a line plot to display a data set of measurements in fractions of a unit ( $1/2$ ,  $1/4$ ,  $1/8$ ).
  - Solve problems involving addition and subtraction of fractions by using information presented in line plots.
- **Classify shapes by properties of their lines and angles**
  - No evidence outcomes mastered during trimester for this indicator.

## Science

- **Physical Science**
  - Magnetism and Electricity
  - **Identify forms of energy**
    - Identify and describe the variety of energy sources.
    - Show that electricity in circuits requires a complete loop through which current can pass.
    - Describe the energy transformation that takes place in electrical circuits where light, heat, sound, and magnetic effects are produced.
    - Use multiple resources – including print, electronic, and human – to locate information about different sources of renewable and nonrenewable energy.
- **Life Science**
  - Structures of Life
  - **Describes and classifies similarities and differences of living things**
    - Use evidence to develop a scientific explanation of what plants and animals need to survive.
    - Use evidence to develop a scientific explanation for similarities and/or differences among different organisms (species).
    - Analyze and interpret data representing variation in a trait.
    - Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate questions about characteristics of living things.
  - **Understands fossils provide information about organisms & environments**
    - Use evidence to develop a scientific explanation for what fossils tell us about a

prehistoric environment.

- Use evidence to develop a scientific explanation for what conclusions can be drawn from similarities between fossil evidence and living organisms.
- Analyze and interpret data to generate evidence about the prehistoric environment.
- Evaluate whether reasoning and conclusions about given fossils are supported by evidence.
- Use computer simulations that model and recreate past environments for study and entertainment.

- **Distinguishes interaction/independence among components of ecosystems**

- Use evidence to develop a scientific explanation on how organisms adapt to their habitat.
- Identify the components that make a habitat type unique.
- Compare and contrast different habitat types.
- Create and evaluate models of the flow of nonliving components or resources through an ecosystem.
- Make a plan to positively impact a local ecosystem.
- Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate endangered habitats.

**Earth Science**

Sun, Moon, and Stars

- **Observes paths and predicts patterns of solar bodies in the solar system**

- Gather, analyze, and interpret data about components of the solar system.
- Utilize direct and indirect evidence to investigate the components of the solar system.
- Gather, analyze, and interpret data about the Sunrise and Sunset, and Moon movements and phases.
- Develop a scientific explanation regarding relationships of the components of the solar system.

## Social Studies

### History

- **Analyzes Colorado history and its relationship to key events in US history**
  - Construct a timeline of events showing the relationship of events in Colorado history with events in United States and world history.
  - Analyze primary source historical accounts related to Colorado history to understand cause-and-effect relationships.
  - Explain the cause-and-effect relationships in the interactions among people and cultures that have lived in or migrated to Colorado.
  - Identify and describe how major political and cultural groups have affected the development of the region.
- **Organizes events to understand Colorado history**
  - Analyze various eras in Colorado history and the relationship between these eras and eras in United States history, and the changes in Colorado in time.
  - Describe interactions among people and cultures that have lived in Colorado.
  - Describe the development of the political structure in Colorado history. Topics to include but not limited to an understanding of the Colorado Constitution and the relationship (between state and national government).
  - Describe the impact of various technological developments. Topics to include but not limited to the state of Colorado, including changes in mining technology; changes in transportation; early 20<sup>th</sup> century industrial changes; and mid-to late 20<sup>th</sup> century nuclear and computer technological changes.
- **Geography**
  - **Uses geographic tools to answer questions about Colorado geography**
    - Answer questions about Colorado regions using maps and other geographic tools.
    - Use geographic grid to locate places on maps and images to answer questions.
    - Create and investigate geographic questions about Colorado in relation to other places.
    - Illustrate, using geographic tools, how places in Colorado have changed and developed over time due to human activity.

- Describe similarities and differences between the physical geography of Colorado and its neighboring states.

- **Analyzes how physical environment influences human settlement**

- Describe how the physical environment provides opportunities for and places constraints on human activities.
- Explain how physical environments influenced and limited immigration into the state.
- Analyze how people use geographic factors in creating settlements and have adapted to and modified the local physical environment.
- Describe how places in Colorado are connected by movements of goods and services and technology.

**Economics**

- **Describes how people respond to positive and negative incentives**

- Define positive and negative economic incentives.
- Give examples of the kinds of goods and services produced in Colorado in different historical periods and their connection to economic incentives.
- Explain how the productive resources-natural, common, and capital-of Colorado have influenced the types of goods produced and services provided.

- **Analyzes the relationship between choice and opportunity cost**

- Define choice and opportunity cost.
- Analyze different choices and their opportunity costs.
- Give examples of the opportunity costs for individual decisions.
- Identify risks that individuals face (PFL).
- Analyze methods of limiting financial risk (PFL).

**Civics**

- **Analyzes and debates multiple perspectives of an issue**

- Give examples of issues faced by the state and develop possible solutions.
- Provide supportive arguments for both sides of a current public policy debate.
- Discuss how various individuals and groups influence the way an issue affecting the state is viewed and resolved.

- **Explains origins, structures, and functions of Colorado government**

- Explain the origins, structure, and functions of the three branches of the state government and the relationships among them.
- Identify and explain a variety of roles leaders, citizens, and others play in state government
- Identify and explain the services state government provides and how those services are funded.
- Explain the historical foundation and the events that led to the formation of the Colorado governments.
- Describe how the decisions of the state government affect local government and interact with the federal law.

### Reviewing the New Language

**Learner Expectations:** The articulation (at each grade level), concepts, and skills of a standard that indicate a student is making progress toward being ready for high school. What do students need to know from preschool through eighth grade? These are the statements contained in the report card.

**Evidence Outcomes:** The indication that a student is meeting an expectation at the mastery level. How do we know that a student can do it?

Example:

**Learner Expectation:**

Use properties of operations to perform multi-digit arithmetic

**Evidence Outcome(s):**

- Fluently add and subtract multi-digit whole numbers using standard algorithms.
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations.
- Illustrate and explain multiplication calculation by using equations, rectangular arrays, and/or area models.



# Report Card Indicators 2017-2018 2nd Trimester

This school year Colorado has new academic standards for students. Colorado state academic standards are the expectations of what students need to know and be able to do. They also express what Colorado sees as the future skills and essential knowledge for our next generation to be successful.

Academic standards are important because they help ensure that all students are prepared for success in college and the workforce. They provide a framework of clear and consistent expectations for students, parents, and teachers; assist in building your child's knowledge and skills; and set high goals for all students.