Colorado Standards - Academic Standards

The Colorado Academic Standards (CAS) are the expectations of what students need to know and be able to do at the end of each grade. They also stand as the values and content organizers of what Colorado sees as the future skills and essential knowledge for our next generation to be more successful. State standards are the basis of the annual state assessment.

To better support standards users, the Office of Standards and Instructional Support has arranged the Colorado Academic Standards to fit individual users and their specific goals.

Content Fields
- Dance
- Drama and Theatre Arts
- Comprehensive Health & Physical Education
- Mathematics
- Music
- Reading, Writing, and Communicating
- Science
- Social Studies
- Visual Arts
- World Languages

- See more at: http://www.cde.state.co.us/standardsandinstruction/coloradostandards-academicstandards#sthash.6NsiKYfT.dpuf

Content Area: Science
Grade Level Expectations: Kindergarten
Standard: 3. Earth Systems Science

<table>
<thead>
<tr>
<th>Evidence Outcomes</th>
</tr>
</thead>
</table>

Students Can:

a. Investigate, explain, and describe that the Sun provides heat and light to Earth (DOK 1)
b. Analyze and interpret temperature data between day (when the Sun shines on our area) and night (when the Sun does not shine on our area) (DOK 1-3)
c. Investigate and communicate findings about what happens when the Sun's light is blocked (DOK 1-2)
d. Investigate and communicate the effect of varying heat and light on the growth of plants through a scientific study (DOK 1-2)
<table>
<thead>
<tr>
<th>Evidence Outcomes</th>
</tr>
</thead>
</table>

**Students Can:**

- a. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation. (CCSS: SL.6.4)
- b. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information. (CCSS: SL.6.5)
- c. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (CCSS: SL.6.6)
- d. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly. (CCSS: SL.6.1)
  - o Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. (CCSS: SL.6.1a)
  - o Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed. (CCSS: SL.6.1b)
  - o Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion. (CCSS: SL.6.1c)
  - o Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing. (CCSS: SL.6.1d)
- e. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study. (CCSS: SL.6.2)
- f. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not. (CCSS: SL.6.3)
- g. Use evidence to develop credibility (such as citing textual evidence to support opinions)
- h. Recognize the difference between informal and formal language and make choices appropriate for group purposes
Content Area: Social Studies  
Grade Level Expectations: Third Grade  
Standard: 1. History

<table>
<thead>
<tr>
<th>Evidence Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Can:</td>
</tr>
<tr>
<td>a. Compare factual historical sources with works of fiction about the same topic (DOK 1-2)</td>
</tr>
<tr>
<td>b. Use a variety of historical sources including artifacts, pictures and documents to help define factual historical evidence (DOK 1-2)</td>
</tr>
<tr>
<td>c. Compare information from multiple sources recounting the same event (DOK 1-2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Can:</td>
</tr>
<tr>
<td>a. Compare past and present situations and events (DOK 1-2)</td>
</tr>
<tr>
<td>b. Chronologically sequence important events in a community or region (DOK 1)</td>
</tr>
<tr>
<td>c. Give examples of people and events, and developments that brought important changes to a community or region (DOK 1-2)</td>
</tr>
<tr>
<td>d. Describe the history, interaction, and contribution of the various peoples and cultures that have lived in or migrated to a community or region (DOK 1-2)</td>
</tr>
</tbody>
</table>
Evidence Outcomes

Students Can:

a. Extend the properties of exponents to rational exponents. (CCSS: N-RN)
   - Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.¹ (CCSS: N-RN.1)
   - Rewrite expressions involving radicals and rational exponents using the properties of exponents. (CCSS: N-RN.2)
b. Use properties of rational and irrational numbers. (CCSS: N-RN)
   - Explain why the sum or product of two rational numbers is rational. (CCSS: N-RN.3)
   - Explain why the sum of a rational number and an irrational number is irrational. (CCSS: N-RN.3)
   - Explain why the product of a nonzero rational number and an irrational number is irrational. (CCSS: N-RN.3)
c. Perform arithmetic operations with complex numbers. (CCSS: N-CN)
   - Define the complex number i such that \( i^2 = -1 \), and show that every complex number has the form \( a + bi \) where \( a \) and \( b \) are real numbers. (CCSS: N-CN.1)
   - Use the relation \( i^2 = -1 \) and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. (CCSS: N-CN.2)
d. Use complex numbers in polynomial identities and equations. (CCSS: N-CN)
   - Solve quadratic equations with real coefficients that have complex solutions. (CCSS: N-CN.7)

¹ For example, we define \( 5^{1/3} \) to be the cube root of 5 because we want \( (5^{1/3})^3 = 5 \) to hold, so \( 5^{1/3} \) must equal 5. (CCSS: N-RN.1)

Evidence Outcomes

Students Can:

a. Reason quantitatively and use units to solve problems (CCSS: N-Q)
   - Use units as a way to understand problems and to guide the solution of multi-step problems. (CCSS: N-Q.1)
     - Choose and interpret units consistently in formulas. (CCSS: N-Q.1)
     - Choose and interpret the scale and the origin in graphs and data displays. (CCSS: N-Q.1)
   - Define appropriate quantities for the purpose of descriptive modeling. (CCSS: N-Q.2)
   - Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. (CCSS: N-Q.3)
   - Describe factors affecting take-home pay and calculate the impact (PFL)
   - Design and use a budget, including income (net take-home pay) and expenses (mortgage, car loans, and living expenses) to demonstrate how living within your means is essential for a secure financial future (PFL)