

2016 Colorado Academic Standards Suggested Revisions

A small group of CAEE members met in January to review the standards and make suggestions for improvement. The group agreed that the environmental education included in the standards was very positive and only minor revisions are suggested. The group focused attention on the Evidence Outcomes section, as it will be used to write future assessment questions for Colorado. Suggestions were also made for additional inquiry questions. Suggestion below were also informed by the work of the BVSD Sustainability Education Task Force’s review of the standards in 2011.

The Colorado Department of Education will be collecting feedback on the standards through an online portal until February 17th. We encourage you submit the comments below or add additional comments through the online portal on CDE’s website. To comment:

1. Visit <https://www.cde.state.co.us/apps/costandardsreview/login>.
2. Create a username and password
3. Visit <https://www.cde.state.co.us/standardsandinstruction/casreview> for questions on the process or portal.

Suggested Revisions in Science:

Add a Prepared Graduate Competency that is about understanding the nature and importance of science and how it used to explore, gain understanding, and make decisions.

Preschool

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 1	Revise Evidence Outcome A: Use senses to gather information about objects- <i>Add "in an outdoor setting"</i> <i>Revise Relevance and Application Statement: Use scientific tools such as magnets, magnifying glasses, scales, and rulers in investigations and play. Add Both Indoors and Outdoors</i>
Life Science	GLE 1	Edit evidence Outcome A: Observe and explore the natural processes of growing, changing, and adapting to the environment <i>Add using local environments</i>
		Edit evidence outcome D: Collect, describe, and record information about living things through discussion, drawings, and charts: <i>Add in Local environments</i>

Kindergarten

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 2	<i>Add an Inquiry Question "How do the physical characteristics of something help us make decisions (for example: what type of material to use)?" Add a Relevance and Application statement "The properties of objects can be used to sort items for recycling."</i>
Life Science	GLE 1	<i>Add an Evidence Outcome: "Describe the characteristics of the living and nonliving things around your school."</i>
Earth System Science	GLE 1	<i>Add Evidence Outcome: Explain that the sun is an energy source for food and all living things.</i>

1st Grade

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 1	<i>Add evidence outcome: specifically about water for example: Explain how Ice and Water are different and impact living things around them.</i>
Earth System Science	GLE 1	<i>Revise Evidence Outcome F to read: Analyze the impact consumption of earth materials including reducing, reusing, and recycling various materials</i>
		<i>Add Inquiry Question 4. What earth materials could you recycle or reuse at school? Add Relevance and Application statement "Everyday items are made from natural resources."</i>

2nd Grade

Content Area	Grade Level Expectation	Comment
Life Science	GLE 1	<i>Revise Evidence Outcome A: Assess and provide feedback on other scientific explanations regarding why an organism can survive in its habitat. Delete other scientific explanations</i>
		<i>Revise Evidence Outcome B to read: Use instruments to make observations about habitat components - for example, data can be collected from a fish tank to assess the environmental health (dissolved oxygen, pH, Nitrogen content). Add fish tank or local stream/pond</i>

		<i>Add evidence outcome: Design features to make your school yard a suitable habitat for insect life.</i>
		<i>Add an Inquiry Question "What makes a habitat healthy?"</i>
	GLE 2	<i>Edit Evidence Outcome B to read: Analyze and interpret data such as temperatures in different locations (Sun or shade) at different times and seasons as evidence of how organisms and the environment are influenced by the weather and changing seasons Insert: Interpret data collected outdoors</i>

3rd Grade

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 1	<i>Add Evidence Outcome "Identify sources of water in Colorado?"</i>
		<i>Add inquiry question, "Where can you find different forms of water outside?"</i>
		<i>Add Inquiry Question "How do Coloradans use water on a typical day, week, month, or year?"</i>
Earth Systems Science	GLE 1	<i>Add Inquiry Question "How do you make responsible choices about resources to use?"</i>

4th Grade

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 1	<i>Add the Inquiry Questions "How does using energy impact the environment?" and "How does this change when using more/or using less energy?"</i>

5th Grade

Content Area	Grade Level Expectation	Comment
Earth Systems Science	GLE 1	<i>Add Evidence Outcome "Compare and contrast different sources of energy, the resources involved in using them, their reliability, and cost-e.g. mining, transportation, infrastructure, environmental impact."</i>
		<i>Add Inquiry Question "What types of and how much renewable and nonrenewable energy are being produced in Colorado?"</i>
		<i>Add inquiry question: "How do you make choices about energy every day?"</i>

6th Grade

Content Area	Grade Level Expectation	Comment
Earth Systems Science	GLE 2	Add inquiry question: What is the impact of moving water from one watershed to another?

7th Grade

Content Area	Grade Level Expectation	Comment
Life Science	GLE 5	Edit Evidence Outcome C: Analyze and interpret data that show human evolution <i>Add and how organisms co-evolve.</i>
Earth Systems Science	GLE 1	Add Tsunami to GLE
		Add evidence outcome: Assess the risk of human activity with relation to location.

8th Grade

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 2	Evidence Outcome B: add in a local setting, such as schools or homes
Earth Systems Science	GLE 1	Revise Evidence Outcome C to read: Use models to develop and communicate the probability of certain weather conditions
	GLE 2	Add evidence outcome "Use a carbon calculators to calculate carbon footprints; brainstorm ways to minimize carbon footprints."
		Add Inquiry Questions: How do sources of water influence climate? And What are natural and human processes that add and remove carbon dioxide and relative speed of these processes?

High School

Content Area	Grade Level Expectation	Comment
Physical Science	GLE 5	In relevance and Application: Add natural gas to #3 and Add economics to #4.

Life Science	GLE 2	Revise Evidence Outcome B to: Describe or evaluate communities in terms of climate change as it progresses over time
		Add an evidence outcome: Evaluate your personal impact on immediate surroundings and wider global environment.
Earth System Science	GLE 4	Revise Evidence Outcome B to: Analyze and interpret data on Earth's climate as impacted by human activity (e.g. energy and water usage)
		Add evidence outcome: Predict impact of climate change and strategies on local and regional ecosystems.
		Revise Relevance and Application Statement #2: Remove might

Social Studies

Preschool

Content Area	Grade Level Expectation	Comment
Geography	GLE 1	Evidence Outcome B: add indoor and outdoor spaces

Kindergarten

Content Area	Grade Level Expectation	Comment
Economics	GLE 1	Add Relevance and Application Statement: Sometimes people make decisions not to buy things because they want to save money and resources.
Civics	GLE 2	Edit Relevance and application #2: Individual actions can make the community better. For example, people clean up the highways or waterways or volunteer in shelters.

1st Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Change Inquiry question 5 to use the resources found in the environment Add inquiry question: How do people take care of the environment in different places?

Civics	GLE 1	Add Relevance and application statement: Responsible community members minimize the negative impacts of activities on the environment.
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2nd Grade

Content Area	Grade Level Expectation	Comment
History	GLE 1	Add inquiry Question: How have people influenced the history of their neighborhood and communities by influencing the health of local habitats?
	GLE 2	Evidence Outcome C: Revise to read: Give examples of people and events, and developments that brought important changes to the community and environment
Economics	GLE 1	Add inquiry Question: How are resources (such as water and energy) used in various communities?
	GLE 2	Revise Relevance and Application Statement #2: Purchase decisions are based on such things as quality, price, and personal goals. For example, you decide whether to spend money on candy or the movies or buying recycled materials.

3rd Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Revise Evidence Outcome B to read: Identify the factors that make a region unique including cultural diversity, industry and agriculture, ecosystems and land forms Add Inquiry Question: How are regions defined by watersheds? Add Relevance and Application: Watersheds define regions of Colorado and create unique distinctions for development, economic, political, ecological, and land management decisions.
Economics	GLE 1	Add an inquiry question: How does the shipment of raw materials and processed good affect the natural environment? And How does production and trade influence the decision you make about what to buy?
Civics	GLE 1	Add evidence outcome: Develop a personal position on an issue, based on your rights and responsibilities.
	GLE 2	Revise Relevance and Application Statement #2: Purchase decisions are based on such things as quality, price, and personal goals. For example, you decide whether to spend money on candy or the movies or buying recycled materials.

4th Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Add inquiry questions: How does settlement impact water availability? How does the availability of water impact settlement?
Economics	GLE 2	Add an evidence Outcome: "Give an example of choice and opportunity cost and positive and negative incentives as it relates to the environment or to sustainability."
Civics	GLE 1	Add Evidence Outcome: Give examples of the responsibilities and rights of individuals and governments with regards to the environment (e.g. clean water, clean air, access to food)

6th Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Add inquiry question: How might the relationship between civilizations and the environment influence whether civilizations succeed or fail? And How does human interaction with the environment impact the availability of resources?

7th Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Add inquiry question: How do regional values and perspectives impact the choices you make about the environment?
Economics	GLE 2	Add inquiry question: How do economic systems also affect regional access to resources?

8th Grade

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Add inquiry question: What are the implications of living in a semi-arid region? And How is human population growth related to planetary sustainability? And How does conflict and cooperation over space and resources positively and negatively impact the environment?

High School

Content Area	Grade Level Expectation	Comment
Geography	GLE 2	Add inquiry question: What are the factors that may lead an individual or country to make decision to reduce human impacts on climate?
	GLE 3	Add inquiry question: What are the factors that may lead an individual or country to make decision to reduce human impacts on climate?
Economics	GLE 1	In Relevance and Application statement #1: replace blood diamonds with development of alternative forms of energy
	GLE 7	Edit evidence outcome C. to read: Select and evaluate strategies to mitigate risk (ecological, health, geopolitical, financial, etc.)
		Add inquiry question: What risks and benefits can be discerned regarding sharing space with the natural world?
Civics	GLE 3	Add inquiry question: How do individual/societal values vs. facts/information play a role in developing policy?