

Colorado Academic Standards for Science August 2025 State Board of Education Revisions

On August 21, 2025, the State Board of Education approved revisions to the K-12 Colorado Academic Standards for Science to make targeted revisions to strengthen the standards around climate science. The following chart identifies the revisions that were approved by the board. Text formatted in bold underline indicates the language that has been revised.

Grade Level/Standard/	Original Language	Revised Language
Page Number	(2020 Standards)	(August 2025)
Grade 3	a. Represent data in tables and	a. Represent data in tables and
Standard 3, Earth and	graphical displays to describe typical	graphical displays to describe typical
Space Science	weather conditions expected during a	weather conditions expected during a
	particular season. (3-ESS2-1)	particular season. (3-ESS2-1)
SC.3.3.1	(Clarification Statement: Examples of	(Clarification Statement: Examples of
	data could include average	data could include Colorado's
p. 42	temperature, precipitation, and wind	average temperature, precipitation,
	direction. Obtain and combine	and wind direction. Obtain and
	information to describe climates in	combine information to describe
	different regions of the world.)	climates in different regions of the
	(Boundary Statement: Graphical	world.) (Boundary Statement:
	displays are limited to pictographs	Graphical displays are limited to
	and bar graphs. Does not include	pictographs and bar graphs. Does not
	climate change.)	include climate change.)
Grade 4	a. Obtain and combine information to	a. Obtain and combine information to
Standard 3, Earth and	describe that energy and fuels are	describe that energy and fuels are
Space Science	derived from natural resources and	derived from natural resources and
	their uses affect the environment.	their uses affect the environment.
SC.4.3.4	(4ESS3-1) (Clarification Statement:	(4ESS3-1) (Clarification Statement:
	Examples of renewable energy	Examples of renewable energy
p. 55	resources could include wind energy,	resources could include wind energy,
	water behind dams, and sunlight;	water behind dams, and sunlight;
	non-renewable energy resources are	non-renewable energy resources are
	fossil fuels and fissile materials.	fossil fuels and fissile materials.
	Examples of environmental effects	Examples of environmental effects
	could include loss of habitat due to	could include loss of habitat due to
	dams, loss of habitat due to surface	dams <u>and wind farms</u> , loss of habitat
	mining, and air pollution from burning	due to surface mining, air pollution
	of fossil fuels.)	from burning of fossil fuels <u>, and harm</u>
		to wildlife.)

Grade Level/Standard/ Page Number	Original Language (2020 Standards)	Revised Language (August 2025)
Grade 5	a. Develop a model using an example to	a. Develop a model using an example to
Standard 3, Earth and	describe ways the geosphere,	describe ways the geosphere,
Space Science	biosphere, hydrosphere and/or	biosphere, hydrosphere and/or
•	atmosphere interact. (5-ESS2-1)	atmosphere interact. (5-ESS2-1)
SC.5.3.3	(Clarification Statement: Examples	(Clarification Statement: Examples
	could include the influence of the	could include the influence of the
p. 65	ocean on ecosystems, landform	ocean on ecosystems, landform
•	shape, and climate; the influence of	shape, and climate; the influence of
	the atmosphere on landforms and	the atmosphere on landforms and
	ecosystems through weather and	ecosystems through weather and
	climate; and the influence of	climate, including climate change;
	mountain ranges on winds and clouds	and the influence of mountain ranges
	in the atmosphere. The geosphere,	on winds and clouds in the
	hydrosphere, atmosphere, and	atmosphere. The geosphere,
	biosphere are each a system.)	hydrosphere, atmosphere, and
	(Boundary Statement: Limited to the	biosphere are each a system.)
	interactions of two systems at a time.)	(Boundary Statement: Limited to the
	interactions of two systems at a times,	interactions of two systems at a time.)
		interactions of two systems at a time.
Grade 5	Evidence Outcome	Evidence Outcome
Standard 3, Earth and	a. Obtain and combine information	a. Obtain and combine information
Space Science	about ways individual communities	about ways individual communities
•	use science ideas to protect the	use science ideas to protect the
SC.5.3.5	Earth's resources and environment.	Earth's ecosystems and
	(5-ESS3-1)	environment. (5-ESS3-1)
p. 67	,	,
Grade 5	Elaboration on the GLE:	Elaboration on the GLE:
Standard 3, Earth and	2. ESS3:C Human Impacts on Earth	2. ESS3:C Human Impacts on Earth
Space Science	Systems: Human activities in	Systems: Human activities in
•	agriculture, industry, and everyday life	agriculture, industry, and everyday life
SC.5.3.5	have had major effects on the land,	have had major effects on the land,
	vegetation, streams, ocean, air and	vegetation, streams, ocean, air and
p. 67	even outer space. But individuals and	even outer space. But individuals and
p. c.	communities are doing things to help	communities are doing things to help
	protect Earth's resources and	protect Earth's ecosystems and
	environments.	environments.
Middle School	a. Analyze and interpret data on natural	a. Analyze and interpret data on natural
Standard 3, Earth and	hazards to forecast future	hazards to forecast future
Space Science	catastrophic events and inform the	catastrophic events and inform the
	development of technologies to	development of technologies to
SC.MS.3.9	mitigate their effects. (MS-ESS3-	mitigate their effects. (MS-ESS3-
	2) (Clarification Statement: Emphasis	2) (Clarification Statement: Emphasis
p. 111	is on how some natural hazards, such	is on how some natural hazards, such
,	as volcanic eruptions and severe	as volcanic eruptions and severe
	weather, are preceded by phenomena	weather, are preceded by phenomena

that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes, such as earthquakes and volcanic eruptions, surface processes, such as mass wasting and tsunamis, or severe weather events, such as hurricanes, tornadoes, and floods. Examples of data can include the locations, magnitudes, and frequencies of the natural hazards. Examples of technologies can be global, such as satellite systems to monitor hurricanes or forest fires, or local, such as building basements in tornado-prone regions or reservoirs to mitigate droughts.)

that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes, such as earthquakes and volcanic eruptions, surface processes, such as mass wasting and tsunamis, or severe weather events, such as hurricanes, tornadoes, and floods. Examples of data can include the locations, magnitudes, and frequencies of the natural hazards, such as Colorado wildfire data. Examples of technologies can be global, such as satellite systems to monitor hurricanes or forest fires, or local, such as building basements in tornado-prone regions or reservoirs to mitigate droughts.)

Middle School

Standard 3, Earth and Space Science

SC.MS.3.10

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Evidence Outcome

b. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. (MS-ESS3-4) (Clarification Statement: Examples of evidence include grade-appropriate databases on human populations and the rates of consumption of food and natural resources [such as freshwater, mineral, and energy]. Examples of impacts can include changes to the appearance, composition, and structure of Earth's systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.)

Evidence Outcome

b. Construct an argument supported by evidence for how human consumption of natural resources impacts Earth's geosphere, biosphere, atmosphere, hydrosphere, and cryosphere. Present pros and cons to the use or impact. (MS-ESS3-4) (Clarification Statement: Examples of evidence include grade-appropriate databases on human populations and the rates of consumption of food and natural resources [such as freshwater, mineral, and energy]. Examples of impacts can include changes to the appearance, composition, and structure of Earth's systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.)

Grade Level/Standard/	Original Language	Revised Language
Page Number	(2020 Standards)	(August 2025)
Middle School	Elaboration on the GLE	Elaboration on the GLE
Standard 3, Earth and		2. ESS3.C Human Impacts on Earth
Space Science	Systems: Human activities have	Systems: Human activities have
	significantly altered the biosphere,	significantly altered the biosphere,
SC.MS.3.10	sometimes damaging or destroying	sometimes damaging or destroying
	natural habitats and causing the	natural habitats and causing the
p. 112	extinction of other species. But	extinction of other species. But
	changes to Earth's environments can	changes to Earth's environments can
	have different impacts (negative and	have different impacts (negative and
	positive) for different living things.	positive) for different living things.
	Typically as human populations and	Typically as human populations and
	per-capita consumption of natural	per-capita consumption of natural
	resources increase, so do the	resources increase, so do the
	negative impacts on Earth unless the	negative impacts on <u>Earth's</u>
	activities and technologies involved	geosphere, biosphere, atmosphere,
	are engineered otherwise.	hydrosphere, and cryosphere
		unless the activities and technologies
		involved are engineered otherwise.
Middle School	a. Ask questions to clarify evidence of	a. Ask questions and learn about the
Standard 3, Earth and	the factors that have caused the rise	effects of all forms of energy use.
Space Science	in global temperatures over the past	Ask questions and gather evidence
	century. (MS-ESS3-5) (Clarification	on the causes of changing global
SC.MS.3.11	Statement: Examples of factors	temperatures, including human
	include human activities [such as	factors and natural cycles. (MS-
p. 114	fossil fuel combustion, cement	ESS3-5) (Clarification Statement:
	production, and agricultural activity]	Examples of factors include human
	and natural processes [such as	activities [such as fossil fuel
	changes in incoming solar radiation or	combustion, cement production, and
	volcanic activity]. Examples of	agricultural activity, manufacturing
	evidence can include tables, graphs,	and mining of materials used in
	and maps of global and regional	renewable energy, and waste
	temperatures, atmospheric levels of	management] and natural processes
	gases such as carbon dioxide and	[such as changes in incoming solar
	methane, and the rates of human	radiation or volcanic activity].
	activities. Emphasis is on the major	Examples of evidence can include
	role that human activities play in	tables, graphs, and maps of global
	causing the rise in global	and regional temperatures,
	temperatures.)	atmospheric levels of gases such as
		carbon dioxide and methane, and the
		rates of human activities. Emphasis is
		on the major role that human
		activities play in causing the rise in
		global temperatures.)

Grade Level/Standard/ Page Number	Original Language (2020 Standards)	Revised Language (August 2025)
High School		b. Evaluate or refine a technological
Standard 3, Earth and	solution that reduces impacts of	solution that reduces energy
Space Science	human activities on natural systems.	production and defend the solution
Space Science	(HS-ESS3-4) (Clarification Statement:	or propose an alternative with
SC.HS.3.11	Examples of data on the impacts of	evidence that considers the impact
30.113.3.11	human activities could include the	on natural systems, the economic
n 170		
p. 170	quantities and types of pollutants	and societal cost, global human
	released, changes to biomass and	rights issues, waste management,
	species diversity, or areal changes in	and long-term effects. (HS-ESS3-4)
	land surface use [such as for urban	(Clarification Statement: Examples of
	development, agriculture, and	data could include measurements
	livestock, or surface mining].	of greenhouse gas emissions from
	Examples for limiting future impacts	fossil fuel combustion, industrial
	could range from local efforts [such	processes, manufacturing and
	as reducing, reusing, and recycling	mining of materials used in
	resources] to large-scale	renewable energy, and other
	geoengineering design solutions	pollution sources; changes to
	[such as altering global temperatures	atmospheric composition; impacts
	by making large changes to the	on biodiversity; and changes in land
	atmosphere or ocean].)	use patterns that affect carbon
		sinks. Examples of technological
		solutions could range from local
		efforts [such as adopting renewable
		energy or sustainable public transit]
		to large scale engineering
		approaches [such as reducing
		industrial emissions or utilizing
		geothermal energy or carbon
		<u>capture and storage].</u>
High School	b. Use a computational representation	b. Use a computational representation
Standard 3, Earth and	to illustrate the relationships among	to illustrate the relationships among
Space Science	Earth systems and how those	Earth systems and how those
	relationships are being modified due	relationships are being modified due
SC.HS.3.11	to human activity. (HS-ESS3-6)	to anthropogenic climate change.
	(Clarification Statement: Examples of	(HS-ESS3-6) (Clarification Statement:
p. 171	Earth systems to be considered are	Examples of Earth systems to be
	the hydrosphere, atmosphere,	considered are the hydrosphere,
	cryosphere, geosphere, and/or	atmosphere, cryosphere, geosphere,
	biosphere. An example of the far-	and/or biosphere. An example of the
	reaching impacts from a human	far-reaching impacts from a human
	activity is how an increase in	activity is how an increase in
	atmospheric carbon dioxide results in	atmospheric carbon dioxide from the
	an increase in photosynthetic	burning of fossil fuels results in an
	biomass on land and an increase in	increase in photosynthetic biomass
	ocean acidification, with resulting	on land and an increase in ocean

impacts on sea organism health and marine populations.) (Boundary Statement: Does not include running computational representations but is limited to using the published results of scientific computational models.)

acidification, with resulting impacts on sea organism health and marine populations.) (Boundary Statement: Does not include running computational representations but is limited to using the published results of scientific computational models.)