



GUIDELINES

BOULDER COUNTY ENVIRONMENTAL EDUCATION GUIDELINES
DEVELOPED BY THE BOULDER COUNTY E MOVEMENT

**HIGH
SCHOOL**
(GRADES 9-12)

High School (Grades 9-12) Learning Objectives

We want our students to be inspired to be life-long learners, stewards, and enthusiasts of the natural world. We want to prepare them to make informed decisions that consider the economic, social and environmental impacts of issues by using credible evidence.



High School (Grades 9-12) Environmental Education Guidelines

Progression of place: The scale expands from the schoolyard into a local natural area (greenbelt, stream, field) and into larger contexts (regional, state, national, global) with multiple encounters with/in an expanded place over time.

NATURAL CONCEPT

Sustainability involves a complex interaction of social, economic, ecological, and political systems.

SOCIAL CONCEPT

Individual and collective action can have implications for sustainability at both the local and global scale.

The Guidelines

Head

ACADEMIC SKILLS AND KNOWLEDGE

- World events and global issues are complex and interdependent.
- One's own culture and history is key to understanding one's relationship to others.
- Multiple conditions fundamentally affect diverse global forces, events, conditions, and issues.
- The current world system is shaped by historical forces.
- When evaluating solutions, it is important to take into account a range of constraints including cost, safety, reliability, and aesthetics and to consider social, cultural, and environmental impacts.



Heart

SOCIAL-EMOTIONAL LEARNING, AFFECTIVE NEEDS, SENSITIVITY, ATTITUDES AND SELF-EFFICACY

- Allow for appreciative inquiry—students have the time and space to notice what is interesting and curious to them in local and urban natural areas, and in wilderness.
- Ask and record questions about what draws the students' attention, and create space for students to find their own answers.





- Make time for and model awareness and observation during time outdoors including recording observations, quiet, and reflection (goal: make this part of your routine with consistency and increased frequency).
- Promote openness to new opportunities, ideas, and ways of thinking.
- Foster value for multiple perspectives, including those that are different or opposed.
- Develop self-awareness about identity and culture with sensitivity and respect for differences.
- Create opportunities for older students to mentor younger students.
- Question prevailing assumptions.
- Model and identify empathy and humility.
- Foster self-awareness about identity and culture with sensitivity and respect for differences.



Hands

ACTION AND SERVICE

- Mentor and participate with younger students in unstructured time outdoors.
- Foster place-making abilities—students have a participatory role in decisions made regarding their community, including policy, design, and improvements.
- Students translate ideas, concerns, and findings into appropriate and responsible individual or collaborative actions to improve conditions.
- Students establish need for service-learning projects, and envision, design, and implement those projects.
- Students adopt shared responsibility and take cooperative action.
- Students seek out and apply understanding of different perspectives to problem-solving and decision-making.
- Create opportunities for individual students to apprentice or volunteer for local professionals in fields related to sustainability (for example, trail maintenance crew, assistant in educational program, photography, bird count).



Feet

CONNECTION TO PLACE

- Explore the local, regional, and national communities in the context of the global scale. Build appreciation for the connections of natural and built aspects of the community, region, nation, and world.
- Understand that our natural and cultural communities extend to the global scale.
- Organize field trips that get students outside the classroom to see something from a new perspective.
- Provide multiple encounters with an expanded place over time.
- Experience a variety of natural environments on a broadening scale (local to regional to national to global).
- Create opportunities for students to choose outdoor recreation experiences including backpacking, hiking, rafting, kayaking, paddleboarding and/or opportunities for students to choose outdoor experiences in ecology, botany, entomology, ornithology, etc.
- Explore nature in connected green spaces, open spaces, and parks in both wilderness areas and in urban areas.



Recommended Activities

Activities listed are intended to provide inspiration for how to connect to a local natural area, or plan a field trip with a partner organization.

- Plan for short walks through natural areas, or breaks under the trees on school grounds before or after test taking, high-pressure events, or as a regular part of the weekly schedule. CH09-GR.HS-S.3-GLE2
- Research a political issue or proposed political action in sustainability that cuts across social, economic, and ecological systems, and analyze the pros and cons. SS09-GR.HS-S.2-GLE.3, SS09-GR.HS-S.3-GLE.1, RWC09-GR.HS-S.4-GLE1
- Connect with sustainability efforts in another country, develop a culturally proficient understanding of the issue and context, and seek appropriate ways to support efforts. RWC09-GR.HS-S.4-GLE1
- Participate in a debate representing diverse stakeholders in a contentious issue. Hold a mock debate and assign stakeholder roles to students to research and represent. RWC09-GR.HS-S.4-GLE2, RWC09-GR.HS-S.4-GLE1
- Partner with an elementary school to implement a school garden or natural area. SC09-GR.HS-S.2-GLE.2
- Raise fish in the classroom. <move to resources (Trout Unlimited)> SC09-GR.HS-S.2-GLE.2
- Engage in Citizen Science SS09-GR.HS-S.3-GLE.2
- Care for living things or natural areas.
- Take action to make a positive impact or solve a problem. SS09-GR.HS-S.4-GLE.1, PE09-GR.HS-S.3-GLE2
- Assess and evaluate current human impacts. SS09-GR.HS-S.2-GLE.2
- Experience a variety of natural environments.

E Guidelines Adoption Form

Middle School and High School

INTENTIONS AT THE HIGH SCHOOL LEVEL:

Each teacher, department, or school adopting these guidelines should complete the following with their intended activities for the year. Your actual activities may shift or expand as the year progresses. These activities may be field-based or classroom-based as appropriate. The recommended activities and resources listed at the end of your grade level chapter may be used to complete this intended plan.

How do you maximize time outside during the school day?

Please list the natural outdoor space(s) or other places related to environmental education that you plan to visit in the upcoming year and how frequently you plan to visit these spaces:

As a result of adopting these guidelines, one thing we intend to change about our practice is:

Initial thoughts about opportunities to integrate heart, hands, feet and head (see recommended activities above). Using the table on the next page, please describe the course offerings, instructional units and activities you plan to implement that address the Environmental Education Guidelines for Boulder County. In your description for each activity, please note which of the four dimensions (heart, hands, feet, head) is addressed. You may also list extracurricular activities in this table. You do not need to list every unit and every activity, just some good examples. Heart, Hands, Feet and Head should all be checked at least once in your overall table. The first three rows are examples.



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Course Title or Student Group	Instructional Unit	Activity	Head	Heart	Hands	Feet
Net Zero Environmental Club	N/A	Student group that meets regularly to collaboratively plan and implement sustainable practices on campus and within the community		X	X	
Physics	Energy	Research the sustainability of electric cars and engage in a debate in which they argue whether electric cars or internal combustion cars are more sustainable.	X			
Biology	Ecology	Students make multiple visits to a creek or pond near the school to collect data on the organisms that live there and water chemistry				X



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Course Title or Student Group	Instructional Unit	Activity	Head	Heart	Hands	Feet

Continuum of the E Guidelines

ECE/Kindergarten

We nurture our students' curiosity while fostering respect for the natural world and for each other. We help improve their basic understandings of nature and their relationships to it. We teach our students that they can influence their environments and their communities by the way they choose to care for themselves, for others and for natural places.

NATURAL CONCEPTS

The natural world is made up of living and non-living things that can be described and categorized.

SOCIAL CONCEPTS

Sequences of events and places or locations can be documented and described.

PROGRESSION OF PLACE

The appropriate scale is classroom community and home, school or schoolyard settings.

1st Grade

We nurture our students' curiosity while fostering respect for the natural world and for each other. We help improve their basic understandings of nature and their relationships to it. We teach our students that they can influence their environments and their communities by the way they choose to care for themselves, for others and for natural places. Describe and categorize; Cause and effect; Empathy

NATURAL CONCEPTS

The natural world is made up of living and non-living things that can be described and categorized.

SOCIAL CONCEPTS

Sequences of events and places or locations can be documented and described.

PROGRESSION OF PLACE

The appropriate scale is classroom community and home, school or schoolyard settings.

2nd Grade

We nurture our students' curiosity while fostering respect for the natural world and for each other. We help improve their basic understandings of nature and their relationships to it. We teach our students that they can influence their environments and their communities by the way they choose to care for themselves, for others and for natural places. All living things, plants, animals (including humans) meet needs from the environment and humans must make choices about how needs are met.

NATURAL CONCEPTS

Living things, including humans, meet their needs from their environments.

SOCIAL CONCEPTS

Communities depend upon and make choices about resources.

PROGRESSION OF PLACE

The appropriate scale is the school community and its local environment, with a focus on immediate surroundings.

3rd Grade

We want our students to be inspired to understand that there is interdependence among animals, humans, and their environments. We want to facilitate opportunities for them to identify how problems sometimes arise when environments change and to work with their peers to solve problems and answer questions.

NATURAL CONCEPTS

Cycles and change are important processes in nature—examples include life cycles, the rock cycle, and the water cycle.

SOCIAL CONCEPTS

Geographic tools can be used to understand our region's watershed, for example, with mapping.

PROGRESSION OF PLACE

The appropriate scale includes the neighborhood, the local community, the watershed, and the regional environment.

4th Grade

We want our students to be inspired to understand and have knowledge of their local ecosystems. We want to facilitate opportunities for them to be stewards of their local communities and competent investigating their own questions so that they may practice forming solutions to problems.

NATURAL CONCEPTS

There is interaction and interdependence among living and nonliving components of systems.

SOCIAL CONCEPTS

There is interaction and interdependence among human and natural systems.

PROGRESSION OF PLACE

The appropriate scale includes the neighborhood, the local community, the watershed, and the regional environment.

5th Grade

We want our students to be inspired to understand and have knowledge of their local ecosystems. We want to facilitate opportunities for them to be stewards of their local communities and competent investigating their own questions so that they may practice

forming solutions to problems. How needs are met with renewable and nonrenewable resources; Humans manipulate conditions to make them livable, which is dependent on resources and energy

NATURAL CONCEPTS

Earth and sun provide diverse renewable and nonrenewable resources.

SOCIAL CONCEPTS

People choose to move to new regions for different reasons, and their movement has a variety of benefits and consequences.

PROGRESSION OF PLACE

The appropriate scale is the regional community and environment, placed in a national context.

Middle School

We want our students to be inspired and gain a sense of self in their natural and human communities, including their impacts on others in those systems. We want to facilitate opportunities for them to discuss ideas, take in multiple perspectives, back up personal opinions with evidence, and distinguish between opinion and fact.

NATURAL CONCEPTS

Matter cycles within ecosystems and energy flows through them. These processes happen at both a local and a global scale, and humans can impact these processes.

SOCIAL CONCEPTS

Human and physical systems vary and interact, and human systems at different scales (community, region, nation, etc.) are interconnected.

PROGRESSION OF PLACE

The appropriate scale continues to expand from the schoolyard into a local natural area (greenbelt, stream, field or BCEE partner field trip) and into larger contexts (regional, state, national, global), including multiple encounters with an expanded place over time. Students explore the local community to watershed to regional environment within global community.

High School

We want our students to be inspired to be life-long learners, stewards, and enthusiasts of the natural world. We want to prepare them to make informed decisions that consider the economic, social, and environmental impacts of issues using credible evidence.

NATURAL CONCEPTS

Sustainability involves a complex interaction of social, economic, ecological, and political systems.

SOCIAL CONCEPTS

Individual and collective action can have implications for sustainability at both the local and global scale.



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PROGRESSION OF PLACE

The appropriate scale continues to expand from the schoolyard into a local natural area (greenbelt, stream, field or BCEE partner field trip) and into larger contexts (regional, state, national, global), with multiple encounters in an expanded place over time.