



GUIDELINES

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



5th Grade Learning Objectives

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.



5th Grade Environmental Education Guidelines

Progression of place: The appropriate scale is regional community and environment placed in national context.

NATURAL CONCEPT

Earth and Sun provide diverse renewable and nonrenewable resources.

SOCIAL CONCEPT

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

The Guidelines

Head

ACADEMIC SKILLS AND KNOWLEDGE

- Structure, function, and relationships exist among human systems and the environment. [NGSS: Systems and system models]
- Sustainability includes the health and wellness of people, the environment, and the economy. [CAS: Nature of Skills and Geography related to SS.5.3.1] [NGSS: 5-ESS3-1]
- Explore the use of renewable/nonrenewable resources and their impacts.
- Explore why people choose to move from one area to another and the consequences that movement has for social and natural environments. [CAS: Nature and Skills of Geography related to SS.5.2.2]
- Production, consumption and consumer choices affect the economy. [CAS: Nature and Skills of Geography related to SS.5.3.1] [NGSS: 5-ESS3-1]
- Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems. [NGSS: Systems and system models]
- Human activities can deliberately or inadvertently alter ecosystems and their resiliency. [CAS: SC.5.3.3.a.] [NGSS: 5-ESS3-1]
- Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space; and individuals and communities are doing things to help protect Earth's resources and environments. [CAS: SC5.3.5.a.] [NGSS: 5-ESS3-1]





Heart

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

- Nurture care and respect for living things and natural areas.
- 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 play, quiet, and reflection (goal: make this part of your routine with consistency and increased frequency).
- Model and identify empathy and humility.
- Build community and shared purpose within the classroom, school, and community.
- Work effectively as a group and respect differences in opinion while working toward common solutions.
- Discuss feelings and connections students have and make when they are outside. Model self-reflection.
- Help students learn to rely on themselves and on each other.



Hands

ACTION AND SERVICE

- Provide unstructured time outdoors, ideally in a natural setting.
- Support students in defining more complex problems, based on evidence, in the school. Take action to make a positive impact or solve a problem in the school.
- Provide opportunities for shared leadership in which students identify, research, and propose a solution to an issue within the classroom or the school.
- Allow for place-making opportunities for students to design and have a voice in the school community.
- Design and evaluate solutions for reducing the impacts of community environmental hazards and issues (for example, creating a “No Idle Zone” in the school’s drop-off/ pick-up area, encouraging parents to turn off their car engine while waiting.)
- With student input, take action to promote positive change in the schoolyard.



Feet

CONNECTION TO PLACE

- Build appreciation for the connections of natural and built aspects of the community and region by naming them, observing them, and asking questions.
- Promote understanding that our natural and cultural communities extend to the regional and national 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.
- Facilitate 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.





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.

- Provide self-guided time outside regularly - make this a regular part of your schedule.
- Walks through the school-yard or neighboring areas (naturalized or not) to record changes over time and questions about observations.
- Research resources in Colorado and causes and consequences of resource use and human movement. [NGSS: 5-ESS3-1]
- Take a real or virtual fieldtrip to a mine, managed forest, agricultural facility, energy facility, water treatment plant. [NGSS: 5-ESS3-1]
- Conduct a water or energy audit. [NGSS: 5-ESS3-1]
- Provide opportunities for leadership of school's composting program including student leaders to help school's students discard lunch waste. [NGSS: 5-LS2-1]
- Conduct investigations using stream tables to document changes in landforms. [NGSS: 5-ESS2-1]
- Lead a school clean-up day or gardening day. Investigate native plants, irrigation, and soil conditions to design and build a small xeric flower garden.
- Engage in Citizen Science.
- Provide opportunities to transfer skills learned in one context to new lessons or investigations (ex. use of tools like the hand lens - practice use indoors, then take outside to investigate).
- Create a terrarium in a bottle – set up experiments to test fertilizers, water amounts, soil types, etc. [CAS: SC.5.LS.2] [NGSS: 5-ESS2-1; 5-LS2-1]
- Investigate the natural and human history of Rocky Flats.