Environmental Education and Outdoor Recreation: Strategies for Impact

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Society of Outdoor Recreation Professionals

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Providing National Leadership and Services for Advancing the Outdoor Recreation Profession

www.RecPro.org
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Learning Objectives

1. Participants will gain a basic introduction to the field of environmental education.

2. Participants will gain a better understanding of current trends, research and issues in environmental education at the state and national level.

3. Participants will learn what role land management personnel can play in addressing environmental education and alleviating issues facing the field.
Outdoor Recreation Professionals

User Group Conflicts
Research
Law and Policy
Regulation
Wildlife
Managing Public Land
Managing Natural Resources
Climate Change
Innovation
Environmental Education

Urban Infrastructure
Defining Environmental Education

We want **EVERYONE** to be able to make **EVERYDAY** decisions that consider the health of the environment and communities.
## Defining Environmental Education

### Providers
- Preschools
- K-12 schools
- Colleges and universities
- Nature centers
- Residential EE facilities and camps
- Parks and protected areas
- Zoos
- Aquariums
- Botanical gardens
- School gardens/farms
- Natural history museums
- Science museums
- Nonprofit organizations
- Government agencies
- Youth organizations
- Corporations

### Audiences
- Preschoolers
- Early childhood educators
- K-12 students
- K-12 educators
- University students
- University faculty
- Families
- Retirees
- Afterschool programs
- Employees and employers
- Community groups
- Religious groups
- Online communities
- Clubs

### Activities
- Curriculum materials and coursework
- Outings
- Extended (multi-day outdoor experiences)
- Interpretive tours
- Community action projects
- Green teams
- Lectures
- Workshops
- Exhibits
- Printed material (e.g., books, pamphlets, posters, reports)
- Radio programs
- Television/video programs
- Films
- Websites
- Online forums
- Social media campaigns
- Mobile apps
- Professional development
- School and community gardens

### Outcomes
- Environmental literacy
- Environmental knowledge
- Science knowledge
- Environmental attitudes
- Ecological worldview
- Issue analysis skills
- Citizenship skills
- Problem solving skills
- Environmental behaviors
- Self-confidence and personal development
- Academic Improvement
- Improved environmental quality
- Environmental justice
- Social equity
- Community wellbeing
- Sustainable communities
EE: Education we need for the world we want!
Investing in the Future

- Connecting people to nature
- Instilling a stewardship ethic
- Creating informed decision-makers
- Inspiring civic engagement
- Developing career pathways
- Ensuring sustainability of conservation efforts
Solutions of Scale to Solve Problems of Scale
A rapidly growing body of research reveals that when children and youth spend both directed and independent time in natural settings, they experience physical, affective, cognitive, and social benefits:
Fostering Recreationists, Citizens, Stewards: No one Sector can achieve Alone
Achieving our Goals

When programs are thoughtful about sequential experiences and learning opportunities that build upon one another, students are more likely to engage and identify with the larger community of conservationists and environmental stewards.

(Williams & Chawla, 2015; Morag & Tal, 2012; Bixler, James & Vadala, 2011; James, Bixler & Vadala, 2010)
Making Connections: EE and Outdoor Recreation
Policy: National Initiatives

• National Environmental Education Act
• Appropriations (EPA, NOAA, ESSA, CTE)
• Recovering America’s Wildlife Act
• Infrastructure?
Policy: State and Local Initiatives

- Oregon’s Outdoor School for All
- Land and Water Conservation Funds
Policy: State and Local Initiatives

Colorado’s State Comprehensive Outdoor Recreation Plan

- **Objective 3**: Enhance knowledge and appreciation of the outdoors and outdoor skills.
  - Supporting Action 1: Collaborate with the Colorado Environmental Education Leadership Council and implementation of the Colorado Environmental Education Plan to enlist the support of schools to educate children about outdoor recreation and conservation ethics. Provide resources for teachers on how to better integrate into their curriculum and resources for programs on how to work with schools.
  - Supporting Action 2: Outdoor recreation program providers should align any school programming with State Educational Standards and seek out training to learn more about what schools need to effectively integrate outdoor recreation into the curriculum.
  - Supporting Action 3: Encourage the construction of natural play areas at schools and neighborhood parks that facilitate outdoor recreation knowledge at a young age.
  - Supporting Action 4: Support and create additional facilitated programs that encourage families, especially those that are new to recreation, to participate in the outdoors such as CPW’s Let’s Camp and Archery in Schools Programs, Boulder County Open Space’s Left Hand Outdoor Challenge Teen Program and Environmental Learning for Kids, Learning Environmental Activities for Families (LEAF) and faith-based partners.
Policy: State and Local Initiatives

Colorado Outdoor Recreation Industry Office 4 Compass Points

- Economic development for the industry (including incentivizing companies to locate here),
- Conservation and stewardship (which also includes access),
- Outdoor recreation industry anchors that are integral to Colorado, and
- Education to improve workforce training and foster the next generation of outdoorists.
Connecting with Formal Education: National Initiatives

- Early Childhood Education
- State-wide Environmental Literacy Plans
- Green Ribbon Schools
- 21st Century Community Learning Centers
Current Landscape of Environmental Education: State and Local Initiatives

Correlating Outdoor Recreation to Standards

Build 3 dimensional lessons around science phenomena (A fact, occurrence, or circumstance that is observed or observable)
Current Landscape of Environmental Education: State and Local Initiatives

Correlating Outdoor Recreation to Standards

Phenomenon - noun, plural phenomena [fi-nom-uh-nuh]--A fact, occurrence, or circumstance that is observed or observable

- Must hook student interest
- Be rich enough to study over a number of lessons (i.e., the explanation of how and why it occurs must encompass several science ideas).
- Be contextualized (rather than generic) by narrowing it down, as much as possible, to a specific specific event, place, time, set of conditions, etc. Rather than having students describe the life cycle of stars in general, have them explain the similarities and differences between the life cycle of our star (the sun) and that of Betelgeuse: How and why is Betelgeuse brighter than our star, the sun?
- Be written as a question that students will work to answer over the course of the unit
- Be introduced to students through an anchoring activity (i.e., a video, photos, demonstration, firsthand experience, reading, etc.)
Correlating Outdoor Recreation to Standards

<table>
<thead>
<tr>
<th>Type of Assessment</th>
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<tbody>
<tr>
<td><strong>Formative</strong></td>
<td></td>
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<tr>
<td><strong>Classroom Embedded Assessment (CEA)</strong></td>
<td>Ongoing process of formative assessment to provide information to teachers about 3-dimensional science learning in their classrooms.</td>
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<tr>
<td><strong>Through Course Tasks (TCT)</strong></td>
<td>Provide a snapshot of student learning/thinking/application of the 3 dimensions of the standards that can be calibrated against expected competency levels of same age/grade students</td>
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<tr>
<td><strong>Summative</strong></td>
<td></td>
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<tr>
<td><strong>Statewide Summative Assessment (SSA)</strong></td>
<td>Provide a sampling of a school's science program level of achievement (based on KAS-For Science) and identify percentage of students meeting expected levels of attainment particularly as they explain phenomena, use models, and solve problems using practices, core ideas, and crosscutting concepts.</td>
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Current Landscape of Environmental Education: State and Local Initiatives

Correlating Outdoor Recreation to Standards

Through Course Task

After **SEP A (obtain/generate/synthesize information)** about a phenomenon **SEP B (produce something with the info)** to explain the phenomenon using the CCC as the sense-making lens.

Example from Project Learning Tree—
After using models to obtain information about different levels of floods in their county, students will use mathematical and computational thinking to determine the potential total losses for different flood levels using scale, proportion and quantity as a sense making lens.
Current Landscape of Environmental Education: State and Local Initiatives

Correlating Outdoor Recreation to Standards

### Appendix B: Environmental Education in the Colorado Academic Standards

This section provides users of this plan with an overview of the Colorado Academic Standards that apply to environmental education. The following charts serve as the framework for developing standards-based environmental education curricula. The first chart outlines the Prepared Graduate Competencies (the end in mind for postsecondary workforce readiness) in social studies, science, and comprehensive health and physical education, and reading, writing and communicating that directly connect to the goals of environmental education. The second chart breaks this down further into Grade Level Expectations which serve as a developmental progression for learning environmental education based on the Colorado Academic Standards. For comprehensive health and physical education, only a select few of the Grade Level Expectations are provided in the interest of space.

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Standard</th>
<th>Prepared Graduate Competency</th>
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<tbody>
<tr>
<td>Social Studies</td>
<td>History</td>
<td>Analyze key historical periods and patterns of change over time within and across nations and cultures</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Geography</td>
<td>Develop spatial understanding, perspectives, and personal connections to the world</td>
</tr>
<tr>
<td>Social Studies</td>
<td></td>
<td>Examine places and regions and the connections among them</td>
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Current Landscape of Environmental Education: State and Local Initiatives

Colorado Department of Education

High School

Unit Title: Adventure Leader (Lake County School District)

Instructional Unit (Word or PDF) | Unit Storyboard

Unit Description: This unit provides opportunities for students to develop skills as adventure leaders that will enhance their independence for exploration in wilderness experiences. These developed skills will potentially include positive social behavior, decision making, communication, collaboration and outdoor safety practices. The ultimate goal will be for students to have an understanding and appreciation for the benefits of lifelong physical activity. The unit culminates with students participating in a wilderness experience designed and led by them cultivating individual physical, mental, and social strengths that lead to strong group dynamics.
Connecting People to Nature: National Initiatives

• Every Kid in a Park
• The Outdoor Alliance for Kids
Connection to Nature: State and Local Initiatives

- Kentucky Inside Out Education
- State parks using EKIP model
- Colorado Inspire Initiative
- Careers in Natural Resources Initiative
Careers in Natural Resources:

To work collaboratively to create more pathways to enable ALL young adults to be educated, prepared, and qualified to enter and maintain professional, sustainable natural resource careers.
Diversity and Inclusion: Looking for UnCommon Partners
Diversity and Inclusion: Connecting EE with Quality of Life Issues
More Research and Resources

eePRO: Networking platform, affinity groups, resources, and more

eeWORKS:
https://naaee.org/our-work/programs/eeeworks
Questions?

Please type your questions into the question pane.

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- Ashley Hoffman, Kentucky Association for Environmental Education, director@kaee.org
- Katie Navin, Colorado Alliance for Environmental Education, katienavin@caee.org
2017 National Outdoor Recreation Conference
Scottsdale, Arizona – May 1 - 4, 2017

“Outdoor Recreation Planning” now available in print and as an eBook at sagamorepub.com
Thank you!

Watch for a follow up email and survey about this webinar.

Check out the SORP website (www.RecPro.org) for more outdoor recreation technical resources.

Questions about SORP?
Contact Brenda Adams-Weyant – Brenda@RecPro.org