



Colorado Collective Outcomes Evaluation Toolkit

Module 3: Publicly Accessible Tools

Tools that already have been developed

Designing tools from scratch can be tough and even a bit daunting. Thankfully, many experts and practitioners have developed, tested and refined data collection tools that can be used for evaluation in environmental education. This next section provides resources and information about many data collection tools that are available to the public.

Now that you've developed your evaluation plan, look through the resources by outcome area to see if there are any tools that could assist you with your evaluation.

The following icons are used throughout to denote the appropriate age group for each tool:



Ages 6 and older



Ages 11 and older



Conservation

**All Colorado ecosystems are healthy,
vibrant, and valued.**

Programs with conservation outcomes include those that increase environmental knowledge, improve environmental awareness and attitudes, and inspire positive environmental actions that lead to improvements in environmental quality.

Population-Level Outcomes

- Increase in connection to nature across all of Colorado's demographics
 - Increase in environmental behaviors.
 - Increase in quality: water, air, and soil.
-

Program-Level Outcomes

- Increase in connection to nature.
- Increase in stewardship actions.
- Increase in desire to participate in positive environmental actions.
- Increase in positive attitudes toward nature and environment.
- Increase in awareness and knowledge of cultural, biological, and scientific systems.

Tools for Conservation



The following list of resources can be a starting place for environmental educators to identify tools or questions that can help gather data about program-level outcomes related to conservation. Please visit each webpage or resource for more information and details.



Practitioner Guide to Assessing Connection to Nature

by Gabby Salazar, Kristen Kunkle and Martha Monroe



This comprehensive guide, which contains 11 tools and approaches, is designed for practitioners in environmental education. It helps organizations choose the right tool to assess and measure their audiences' connection to nature.

To access the full guide, visit:

<https://eepro.naaee.org/resource/practitioner-guide-assessing-connection-nature>

EE21 Tools and Guidance

by Robert B. Powell and Marc J. Stern



This survey is geared for students aged 11 and up and measures multiple outcomes in environmental education. This tool has questions focused on place connection, environmental stewardship, environmental attitudes, and more.

To access detailed information about the tool, visit:

https://frec.vt.edu/people/Stern/stern_docs.html



Focus Group Protocol for CAEE

by CAEE



This focus group protocol was created by CAEE to support its AmeriCorps program. This tool incorporates example questions that can be used for four of the Colorado Collective Outcomes.

To access this protocol, visit:

<https://tinyurl.com/2wk8dv6p>



Colorado Collective Outcomes Survey Menu

by CAEE



This tool provides a menu of questions tailored toward four of the Colorado Collective Outcomes, and can be used with students of all ages.

To access this tool, visit:

<https://tinyurl.com/mr3vrt9f>



Education

Environmental education supports and ensures all PreK-12 students are lifelong learners with successful school outcomes.

Programs with education outcomes include those that improve academic performance, increase E-STEAM literacy, improve standardized test scores, and expand school engagement using the environment as an integrating context.

Population-Level Outcomes

- Increase in schools with EE.
- Increase in students' level of engagement in learning (attendance and referrals).
- Increase in academic testing scores.
- Increase in students enrolled in NR/ENVS degree program.

Program-Level Outcomes

- Increase in understanding of EE program content.
- Increase in engagement in learning.
- Increase in time spent on EE in the classroom and outdoors.
- Increase in culturally relevant curriculum.
- Increase in professional development in environmental education.
- Increase in workforce readiness skills.

Tools for Education



The following list of resources can be a starting place for environmental educators to identify tools or questions that can help gather data about program-level outcomes related to education. Please visit each webpage or resource for more information and details.

EE21 Tools and Guidance

by Robert B. Powell and Marc J. Stern



In addition to outcomes related to conservation, this tool measures understanding of EE content as well as engagement in learning and school.

To access detailed information about the tool, visit:
https://frec.vt.edu/people/Stern/stern_docs.html



Cornell Lab of Ornithology, Citizen Science, Tools for Measuring Outcomes



The project team at the Cornell Lab of Ornithology created a toolkit of resources and data collection tools to measure outcomes such as interest, motivation, self-efficacy and skills. The following tools can be used to measure outcomes in education:

Interest in Science and Nature
Self-Efficacy for Environmental Action Scale
Self-Efficacy for Learning and Doing Citizen Science Scale

The tools are available for free and instant download by completing a brief request form at the project's website:
<https://www.birds.cornell.edu/citizenscience/measuring-outcomes/>



Focus Group Protocol for CAEE

by CAEE



See Conservation section for description. To access this protocol, visit:
<https://tinyurl.com/2wk8dv6p>



Colorado Collective Outcomes Survey Menu

by CAEE



See Conservation section for description. To access this tool, visit:
<https://tinyurl.com/mr3vrt9f>



Positive Child and Youth Development

All Colorado children and youth grow into responsible, resilient, engaged citizens that care for themselves, their natural environment, and their communities.

Programs with youth development outcomes are aimed at guiding young people as they grow into responsible, engaged citizens that care for the environment and their communities. These outcomes may be achieved through strengths-based programs focused on character and leadership combined with outdoor experiences or community service.

Population-Level Outcomes

- Increase in opportunities for civic or community engagement.
 - Increase in programs that support PYD
Components: Competence, Confidence, Character, Caring, Connection, Contribution.
 - Increase in opportunities that provide a continuum of experience between organizations, partnerships, and other collaborations.
-

Program-Level Outcomes

- Increase in civic and community engagement.
- Increase in understanding of healthy and unhealthy risk.
- Increase in critical thinking/problem solving skills.
- Increase in self-efficacy.
- Increase in participants' competence, confidence, character, caring, connection or contribution.
- Increase in youth-directed internships, mentors, authentic adult and peer relationships.

Tools for Positive Child and Youth Development



The following list of resources can be a starting place for environmental educators to identify tools or questions that can help gather data about program-level outcomes related to positive youth development. Please visit each webpage or resource for more information and details.

EE21 Tools and Guidance

by Robert B. Powell and Marc J. Stern



In addition to outcomes previously noted, this tool measures 21st Century Skills, self-identity and self-efficacy. (See Education section for link.)



Toolkit for Evaluating Positive Youth Development

by The Colorado Trust



This comprehensive toolkit, developed for after-school programs, measures several PYD outcomes including community involvement, positive core values and sense of self.

To access the full toolkit, visit:

<https://www.coloradotrust.org/wp-content/uploads/2015/05/ASIToolkitJun04.pdf>

Positive Youth Development Student Questionnaire Short Version

from 4-H Study of PYD by Richard Lerner et al.



This student questionnaire measures the 5 C's (Competence, Connection, Confidence, Caring and Character), developed by Richard Lerner and colleagues as part of the 4-H Study of Positive Youth Development.

To access the tool, visit:

<https://tinyurl.com/2mxeybcd>



Focus Group Protocol for CAEE

by CAEE



See Conservation section for description and link.



Colorado Collective Outcomes Survey Menu

by CAEE



See Conservation section for description and link.



Health and Wellness

Through increased safe access, connection to and comfort in the natural environment, all Coloradans are healthy and well—physically, mentally, and emotionally.

Programs with health and wellness outcomes are focused on improving physical, mental, emotional, and social health and wellness for participants through connection with nature. Health outcomes include improving nutrition, increasing physical fitness, reducing stress and anxiety, recovering from physical or psychological trauma, and increasing awareness and understanding of personal and environmental health.

Population-Level Outcomes

- Increase in time in nature.
- Decrease in systemic barriers to accessing nature.
- Increase in understanding of the connection between healthy environment and healthy self.
- Improved physical, mental and emotional health.
- Decrease in stress, depression, fatigue, sedentary lifestyle and chronic illness.
- Increase in access to healthy nutrition.

Program-Level Outcomes

- Increase in time spent in nature.
- Decrease in barriers to accessing nature.
- Increase in comfort and enjoyment to explore outdoor spaces.
- Increase in self-agency in the outdoors.
- Decrease in fear, anxiety, unknown.
- Increase in sense of place and place connection.
- Increase in perceived wellness and health as result of being in outdoors.
- Increase in outdoor community-based health interventions.



The following list of resources can be a starting place for environmental educators to identify tools or questions that can help gather data about program-level outcomes related to health and wellness. Please visit each webpage or resource for more information and details.

The People and Nature Survey



by Natural England

The People and Nature Survey for England gathers data through an online survey relating to people's enjoyment, access, understanding of and attitudes to the natural environment, and its contributions to wellbeing.

It builds off the Monitor of Engagement with the Natural Environment (MENE) survey, which ran for over a decade.

To visit the tools for adults and children, visit:

<https://publications.naturalengland.org.uk/publication/6382837173583872>

British Children's Play Scale

This survey assesses children's wellbeing and play, particularly in outdoor settings. More information about the tool and the results can be found here:

Children's Play and Independent Mobility in 2020: Results from the British Children's Play Survey by Helen Dodd: <https://doi.org/10.3390/ijerph18084334>

To access a copy of the tool, visit:

<https://tinyurl.com/389pe484>



Practitioner Guide to Assessing Connection to Nature



by Gabby Salazar, Kristen Kunkle and Martha Monroe

In addition to measuring connection to nature, several tools included with this guide have questions to help understand participant's wellbeing.

To access the full guide, visit:

<https://eepro.naaee.org/resource/practitioner-guide-assessing-connection-nature>



Focus Group Protocol for CAEE



by CAEE

See Conservation section for description and link.



Colorado Collective Outcomes Survey Menu



by CAEE

See Conservation section for description and link.



Social Justice

All Coloradans have access to and opportunity to experience the outdoors.

Programs with social justice outcomes include those that increase access and opportunity for underserved communities and underrepresented populations. These outcomes include increasing access to outdoor experiences, improving urban green space, and developing and supporting environmental educators and leaders from traditionally underrepresented groups.

Population-Level Outcomes

- Increase in communities with access to safe, natural and healthy environments.
- Increase in Coloradans who feel welcomed and comfortable in outdoor spaces.
- Decrease in barriers to accessing nature.
- Use of outdoor spaces reflects demographics of community.
- Increase in commitment to DEI within organizations.

Program-Level Outcomes

- Increase in participants who feel welcome and comfortable in outdoor spaces.
- Increase in programs honoring diversity in outdoor spaces.
- Increase in diversity of organizational leadership, program staff and mentors.
- Increase in DEI training for staff.
- Increase in culturally aware and responsive programming.
- Improved access to outdoor spaces for all abilities.



Tools for Social Justice

The following list of resources can be a starting place for environmental educators to reflect on their internal practices as they related to social justice outcomes. Please visit this resource for more information and details.

Self-Evaluation Tools

by Oregon State University Extension Services Outdoor School Program.

Oregon State University Extension Service created a series of self-evaluation tools to support Oregon's Outdoor School. The goal of these tools is to support programs in moving through the evaluation cycle, which includes: 1) Evaluating current policies and practices; 2) Reflecting, learning, and planning for change; and 3) Implementing changes to make programs more equitable, accessible, and culturally responsive.

While components of these self-evaluations may reflect specific criteria for Oregon programs, we believe all organizations can benefit from the authentic reflection, learning and action that can be facilitated by using these tools. By engaging in internal reflection and developing a strategic improvement plan, Colorado organizations can make progress toward achieving the Social Justice population-level and program-level outcomes.

Recommended tools:

Culturally Responsive Self-Evaluation Tool
Special Education and Accessibility Self-Evaluation Tool

To access the tools and additional information, visit:

<https://outdoorschool.oregonstate.edu/about-us/research-evaluation-assessment/self-evaluation-tools/>

Additional Resources

Websites for Tools

After-School Initiative's Toolkit for Evaluating Positive Youth Development by The Colorado Trust: <https://www.coloradotrust.org/sites/default/files/ASIToolkitJun04.pdf>

British Children's Play Scale

Children's Play and Independent Mobility in 2020: Results from the British Children's Play Survey by Helen Dodd: <https://doi.org/10.3390/ijerph18084334>

To access a copy of the tool, visit:

https://osf.io/637rd/?view_only=e11a2e1accd843c59cecb3a54fc7767e

or <https://tinyurl.com/389pe484>

Colorado Collective Outcomes Survey Menu by CAEE: <https://tinyurl.com/mr3vrt9f>

Cornell Lab of Ornithology, Citizen Science, Tools for Measuring Outcomes and Evaluating Citizen Science. The scales are available for free and instant download by completing a brief request form at the following website:

<https://www.birds.cornell.edu/citizenscience/measuring-outcomes/>

EE21 Tools and Guidance by Robert B. Powell and Marc J. Stern:

https://frec.vt.edu/people/Stern/stern_docs.html

Focus Group Protocol for CAEE by CAEE: <https://tinyurl.com/2wk8dv6p>

Positive Youth Development Student Questionnaire by Richard Lerner et al.:

[https://cyfar.org/sites/default/files/Positive%20youth%20development%20student%20short%20\(10%20yrs%20and%20older\)_0.pdf](https://cyfar.org/sites/default/files/Positive%20youth%20development%20student%20short%20(10%20yrs%20and%20older)_0.pdf)

or <https://tinyurl.com/2mxeybcd>

Practitioner Guide to Assessing Connection to Nature by Gabby Salazar, Kristen Kunkle and Martha Monroe: <https://eepro.naaee.org/resource/practitioner-guide-assessing-connection-nature>

Self-Evaluation Tools by Oregon State University Extension Services Outdoor School Program: <https://outdoorschool.oregonstate.edu/about-us/research-evaluation-assessment/self-evaluation-tools/>

The People and Nature Survey by Natural England:

<https://www.gov.uk/government/collections/people-and-nature-survey-for-england>

Additional Resources and References

Bowers, E. P., Larson, L. R., & Parry, B. J. (2021). Nature as an Ecological Asset for Positive Youth Development: Empirical Evidence From Rural Communities. *Frontiers in Psychology*, 12, 688574. <https://doi.org/10.3389/fpsyg.2021.688574>

Brooks, S., Braun, S., Backe, K., and Jones, C.V. (2020) Cultural Responsiveness Self-Evaluation Tool for Outdoor School. Oregon State University Extension Service Outdoor School Program.

North American Association for Environmental Education (NAAEE), eeVAL.
<https://eeepro.naaee.org/>

Dodd, Helen F., Lily FitzGibbon, Brooke E. Watson, and Rachel J. Nesbit 2021. "Children's Play and Independent Mobility in 2020: Results from the British Children's Play Survey" *International Journal of Environmental Research and Public Health* 18, no. 8: 4334.
<https://doi.org/10.3390/ijerph18084334>

Flagg, B. N., Porticella, N., Bonney, R., and Phillips, T. (2016). Interest in Science and Nature Scale (Youth Version). Copyright Twin Cities Public Television. Technical Brief Series. Cornell Lab of Ornithology, Ithaca NY.

Larson, L. R., Szczytko, R., Bowers, E. P., Stephens, L. E., Stevenson, K. T., & Floyd, M. F. (2019). Outdoor Time, Screen Time, and Connection to Nature: Troubling Trends Among Rural Youth? *Environment and Behavior*, 51(8), 966–991.
<https://doi.org/10.1177/0013916518806686>
<https://kathrynstevenson.wordpress.ncsu.edu/files/2018/11/0013916518806686.pdf>

Lerner, R. M., Lerner, J. V., Almerigi, J., Theokas, C., Phelps, E., Gestsdottir, S. Naudeau, S., Jelacic, H., Alberts, A. E., Ma, L., Smith, L. M., Bobek, D. L., Richman-Raphael, D., Simpson, I., Christiansen, E. D., & von Eye, A. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth grade adolescents: Findings from the first wave of the 4-H Study of Positive Youth Development. *Journal of Early Adolescence*, 25(1), 17-71. A full list of publications can be found at <https://sites.tufts.edu/iaryd/research/current-projects/4-h-study-of-positive-youth-development/>

Monitor of Engagement with the Natural Environment. Technical Report to the 2019-2018 surveys. Natural England Joint Report RP2920. 10 September 2018. Interactive website with results: <https://defra.maps.arcgis.com/apps/Cascade/index.html?appid=d5fe6191e3fe400189a3756ab3a4057c>

Additional Resources and References

Phillips, T., Porticella, N., Bonney, R. (2017). Self-Efficacy for Learning and Doing Citizen Science Scale. Technical Brief Series. Cornell Lab of Ornithology, Ithaca NY.

Porticella, N., Phillips, T., Bonney, R. (2017). Self-Efficacy for Environmental Action Scale (SEEA, Generic). Technical Brief Series. Cornell Lab of Ornithology, Ithaca NY.

Robert B. Powell, Marc J. Stern, Brandon Troy Frensley & DeWayne Moore (2019). Identifying and developing crosscutting environmental education outcomes for adolescents in the twenty-first century (EE21), *Environmental Education Research*, 25:9, 1281-1299, DOI: 10.1080/13504622.2019.1607259. Link to this article: <https://doi.org/10.1080/13504622.2019.1607259>

Salazar, G., Kunkle, K. & Monroe, M. C. (2020). Practitioner guide to assessing connection to nature. Washington, DC: North American Association for Environmental Education.

The Colorado Trust. After-School Initiative's Toolkit for Evaluating Positive Youth Development. Denver, CO: The Colorado Trust; 2004.
<https://www.coloradotrust.org/sites/default/files/ASIToolkitJun04.pdf>