



CBEL+

Census 2022

COMMUNITY-BASED OUTDOOR
& ENVIRONMENTAL LEARNING



Census of Community-Based Outdoor & Environmental Learning in Maine

SUMMARY REPORT



ACKNOWLEDGEMENTS

The Census of Community-Based Outdoor and Environmental Learning in Maine is a project of Teach ME Outside (TMO). TMO is a collaboration between the Maine Mathematics and Science Alliance, the Maine Environmental Education Association, and the Nature Based Education Consortium. It supports and works in partnership with Maine communities to ensure that all Maine youth have access to powerful, hands-on environmental learning opportunities. We would like to thank the following for important contributions to this project.

CENSUS FUNDERS

Elmina B. Sewall Foundation
Ferguson Foundation
Maine Community Foundation
Pisces Foundation

THANK YOU

to everyone who participated in the public town hall sessions, beta-tested the survey for functionality, and provided input throughout the process.

LEADERSHIP TEAM

Alex Brasili | MMSA
Kelsie Dawson | MMSA
Sasha Breus | MMSA
Olivia Griset | MEEA
Anna Sommo | MEEA

CENSUS ADVISORS AND PARTNERS

Karyl Askew | Karyl Askew Consulting
Patti Bailie | University of Maine, Farmington
Monifa Beverly | Beverly Consulting Group
Stephanie Cesario | Maine Farm to School Network
Dave Chase | DRC Consulting
Leigh Ann Fish | University of Maine, Farmington
Charissa Jones | Oregon State University
Sarah Kearsley | Lake Region Middle School
Amanda Kolburn | Karyl Askew Consulting
Kayla Lee | Adaptive Outdoor Education Center
Page Nichols | Department of Education
Jenn Page | Department of Education
Catherine Sanders | Expanding Opportunities
John van Dis | Hurricane Island Center for Science and Leadership
Katie West | Portland Public Schools
Glen Widmer | RSU#71
Molly Woodring | Maine Audubon

DESIGN AND MARKETING TEAM

David Allen, Render (renderpublications.com) | graphic designer

ON THE COVER | Top to bottom, left to right

Saccarappa Elementary
Katahdin High School,
Portland Public Schools,
Great Salt Bay Community School

EXECUTIVE SUMMARY

Community-based outdoor and environmental learning programs are on the rise in Maine, according to data from the 2022 Census of Community-Based Outdoor and Environmental Learning in Maine. The survey initiative, led by a collaborative of statewide organizations called Teach ME Outside, captured data from 917 in-school and out-of-school educators, administrators, and leaders about the state of environmental education across Maine, nearly double the response rate from the 2019 survey. Responses came from all 16 Maine counties and included 226 public schools, representing 127 school districts across the state; 28 private schools; and 343 non-profit organizations, businesses, camps, land trusts, libraries, etc. This initiative builds on the comprehensive baseline report from 2019. The study aims to provide a clearer understanding of how to equitably meet the needs of learners and educators in outdoor and environmental learning today and into the future. The 2022 survey also expanded to include early childhood education providers.

Key findings from the report include:

Infrastructure

- Schools are investing in infrastructure to support outdoor and environmental learning. Administrators report that the most common supports at their school include access to outdoor gear and the development of outdoor spaces.

Barriers

- The most significant barriers to outdoor and environmental learning remain funding for projects, time for educators to develop and deliver them, and availability of outdoor equipment. Funding continued to be the most significant barrier identified in the 2019 and 2022 data despite significant recent investments from state and philanthropic sources.

Professional Development

- The most pressing professional development need identified in the outdoor and environmental learning field was support for Wabanaki history and culture in programs. Other high-priority professional development topics included gardens and local food systems, teaching and learning outdoors, and climate education.

Partnerships




- Partnerships remain essential to outdoor and environmental learning programs, with 75% of respondents stating they had at least one partner with whom they worked.



W.G. Mallett School, Hannah Goodenow

A COMPARISON BETWEEN THE 2019 AND 2022 CENSUS DATASETS CAN BE FOUND IN THE TABLE BELOW



	2019 CENSUS
RESPONSES	479 individuals from 434 in-school and out-of-school settings  
TYPES OF SETTINGS REPRESENTED	28% of public schools in Maine 19% of private schools in Maine 40% of Maine land trusts 28% of Maine camps
COUNTY REPRESENTATION (responses compared to population data)	Underrepresented counties: Androscoggin, Kennebec, Penobscot, Somerset (Hancock, Knox, Lincoln, Waldo, and Washington were overrepresented) 
ROLES REPRESENTED	School administrators, classroom educators, out-of-school educators
EXPANDED QUESTION SETS	N/A
BARRIERS IDENTIFIED BY SCHOOL ADMINISTRATORS	Funding, scheduling/time, transportation, pedagogical expertise
YOUTH SERVED BY RESPONDING ORGS. (approx)	80,000
ORGANIZATIONS' WORK WITH SCHOOLS	52% work with schools regularly 31% used multiple session visits
PROFESSIONAL DEVELOPMENT NEEDS	Climate education was the top need
CBEL AS A GOAL	55% of responding schools had CBEL as a goal of their academic programming
EVALUATION	54% of projects evaluated

Deer Isle Stonington Elementary School, Mickie Flores

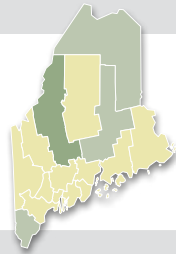
2022 CENSUS



917 individuals from 622 in-school and out-of-school settings

37% of public schools in Maine
27% of private schools in Maine
55% of Maine land trusts
20% of Maine camps

Underrepresented counties:
Aroostook, York, Penobscot
(Somerset was overrepresented)



Childcare sector added

Expanded question sets around climate education, equity and access, and partnerships

Funding, scheduling/time, pedagogical expertise, teacher buy-in

163,000

71% work with schools regularly
39% used multiple session visits

Wabanaki studies was the top need: climate education was the fourth-highest-rated need

55% of responding schools had CBEL as a goal of their academic programming

54% of projects evaluated



Lyseth Elementary School, Katie West



Longfellow School, Melissa Riley



Presumpscot School,
Rebecca Maiorano



Gerald E. Talbot Elementary School,
Allison Richards

CBEL Landscape Across Educational Settings and Roles

Recommendations & Supporting Details

HIGHLIGHT SUCCESSFUL PROGRAMMING AT PRE-K AND HIGH SCHOOL LEVELS

There are opportunities to highlight successful programming at pre-K and high school levels, in particular, to elevate programming possibilities and connections to learning standards. (pg. 16)

PROVIDE TOOLS FOR ADMINISTRATORS TO DEMONSTRATE SUPPORT FOR CBEL PROJECTS

Our communities can do more to model and support school administrators in elevating the innovative programming happening at their schools, for example, by: providing templates or examples of outreach materials, offering to write press releases, and celebrating innovative programming occurring in schools. (pg. 18)

MEET EDUCATORS WHERE THEY ARE, BUT ASPIRE FOR SUSTAINED PROGRAMMING

We should aspire for more sustained programming and collaboration between schools and organizations while recognizing the need for a suite of options to meet partner educators and communities where they are, build foundational relationships, and ensure that partnerships are a good fit. (pg. 19)

INVEST IN CBEL IN CHILDCARE SETTINGS

Childcare settings are embracing CBEL and have the time and flexibility to do so. Investments in quality CBEL programming and professional learning for educators in early childhood have the potential to have incredibly high returns for equitable access for Maine youth. (pg. 20)

LOWER BARRIERS FOR EDUCATORS TO ACCESS RESOURCES TO SUPPORT CBEL

Many creative solutions to identified barriers require a significant investment of time and resources by the educators themselves. Given how limited their time is and how many additional responsibilities they are juggling, barriers should be further reduced. (pg. 22)

PRIORITIZE EVALUATION IN THE CBEL FIELD

The CBEL field needs to prioritize evaluation to iterate on and improve programming and better understand student outcomes. Evaluation of CBEL projects has stayed the same since 2019 and indicates that more support is needed for evaluation in the sector. (pg. 23)

HIGHLIGHT INTERDISCIPLINARY APPLICATIONS OF CBEL PROJECTS

Support is needed to highlight interdisciplinary applications of CBEL projects and to support out-of-school educators in better understanding how their projects align or can align with academic standards used in schools, especially to support collaborative efforts between schools and organizations. (pg. 24)

BROADEN THE CBEL NETWORK

There is a pool of Maine educators willing and ready to engage in CBEL but who need some structure and support. (pg. 24)



Ocean Avenue Elementary School,
Hannah Guillaume Chimenti



Coastal Washington County
Institute of Technology

Climate Education in Maine

Recommendations & Supporting Details

INVEST IN INNOVATIVE CLIMATE EDUCATION PROFESSIONAL DEVELOPMENT MODELS

Professional development in climate education is needed across the sector and can come from many different avenues, including (a) Informal providers and organizations providing training for educators; (b) Higher education institutions developing certifications to support pre-service teachers and offering continuing education credits; and (c) Schools sharing climate education success stories and strategies in climate education with each other. (pg. 25)

SUPPORT CROSS-SECTOR CLIMATE EDUCATION PARTNERSHIPS

Out-of-school educators are poised to be strong partners for both classroom and childcare educators in supporting climate education with their motivation and drive to incorporate it into their instruction. Cross-sector partnerships in education should be encouraged to support climate education in Maine. (pg. 25)

SUPPORT REGIONALLY & CULTURALLY APPROPRIATE CLIMATE EDUCATION

Climate education support should be targeted to regional needs and should be culturally appropriate but grounded in some fundamental practices that educators know to be effective, such as focusing on local impacts and building up a stewardship ethic and care for nature in students at early ages. (pg. 27)

BUILD NETWORKS OF SUPPORT FOR CLIMATE EDUCATORS

One area of growth across all portions of the state is building networks of educators to support and learn from each other in climate education – something currently lacking across the state overall but identified as an essential strategy for moving forward with climate education. (pg. 28)

Equitable Access to CBEL

Recommendations & Supporting Details

FUND SUSTAINED PROFESSIONAL DEVELOPMENT FOCUSED ON EQUITABLE ACCESS TO CBEL

Educators need more funded professional development opportunities to explore different strategies for providing equitable access to CBEL for all students with time to incorporate learnings and connect with others. Professional Learning Community models that establish trust and community between educators over time for shared learning rather than one-off training are important to invest time and resources into. (pg. 31)

INVEST IN SPECIFIC TRAINING FOR ENGAGING VARIOUS POPULATIONS OF STUDENTS IN CULTURALLY RESPONSIVE CBEL METHODS

Educators overall need training to support all students as Maine's demographics change and get more culturally diverse. Classroom and informal educators could benefit from more experience with immigrant, English Language Learners, and refugee populations. Adapting to different student learning styles is a skill educators can build with training and access to resources such as culturally responsive curriculum materials. Informal educators are less experienced than classroom teachers in working with students with disabilities, different abilities, or chronic conditions. The field needs training on how to build CBEL programming to be inclusive of students' varying needs so all can benefit from CBEL experiences. (pg. 32)



Skowhegan Area High School,
Kate Drummond



South Portland High School

Productive Partnerships

Recommendations & Supporting Details

COMMIT TO LONG-TERM FUNDING TO SUPPORT EFFECTIVE CBEL PARTNERSHIPS

Funders must commit to long-term funding to support establishing and maintaining partnerships over time. Sustained funding where partnerships are needed or already flourishing is critical, knowing that the most successful partnerships are well-established. (pg. 33)

PRIORITIZE PARTNERSHIP SUPPORT TO THE RIM COUNTIES

Resources should be prioritized to support the development and maintenance of partnerships in the Rim Counties, which have nearly half as many partners on projects compared to other areas of the state. Additionally, organizations and networks with the capacity to expand their reach should develop sustained and meaningful relationships in those areas to support CBEL projects. (pg. 34)

PROVIDE OPPORTUNITIES TO CONNECT POTENTIAL PARTNERS

The CBEL field can work to help individuals identify and connect with potential partners who have aligned missions and goals through networking opportunities, regional gatherings, and resources to foster partnerships. (pg. 35)

Advancing the CBEL Field

Recommendations & Supporting Details

INVEST IN PRE-SERVICE AND IN-SERVICE CBEL PROFESSIONAL DEVELOPMENT

Investments in both pre-service and continuing education/professional development opportunities are equally important to ensure that educators receive support regardless when they enter the CBEL field in their educational career. (pg. 36)

PRIORITIZE TIME & FUNDING FOR INTEGRATING WABANAKI HISTORY & CULTURE INTO CBEL PROGRAMS

Time and funding should be invested to meet educators' needs for bringing Wabanaki history and culture into CBEL programming. Investment into sustained professional development over time, leaning into established and well-respected resources, and thoughtfully designing lesson examples and case studies of success in partnership with Wabanaki individuals are all strategies for the field to consider. (pg. 37)



Cascade Brook School, Sarah Reynolds

INTRODUCTION

As the last several years have demonstrated, outdoor and environmental learning is an increasingly important component of the educational landscape for youth in Maine. During the COVID-19 pandemic, the outdoors was another space for many schools to safely distance students and conduct innovative educational experiences. Interest in our trails, parks, and natural areas has increased for families and individuals. State government, the Maine Department of Education, and philanthropy have invested significantly in resourcing youth outdoor and environmental learning experiences. Additionally, findings from the first Census of Community-Based Environmental Learning in 2019 have greatly affected the field, helping to pass legislation, increase network collaboration, share resources, and highlight programs across our state. Maine is at the forefront of outdoor and environmental learning in the United States.

This follow-up Census of Community-Based Outdoor and Environmental Learning (CBEL) in 2022 will help us understand how our field has changed in the last three years and how we can continue to grow and support this important work. Results will be used to facilitate communication, collaboration, professional development, and outreach services to increase the quality and quantity of outdoor and environmental learning in Maine and communicate the value of these programs for youth. Our ultimate goal is to ensure equitable access to high-quality outdoor and environmental learning programs for all youth across the state.

What is Community-Based Outdoor and Environmental Learning?

We are interested in learning how schools, organizations, and other settings across Maine are educating youth about the environment while also connecting them to their communities. These learning experiences do not have to take place outdoors, but they do need to connect to locally relevant content. There are many terms for this type of learning, including “Community-Based Education,” “Outdoor Education,” “Nature-Based Education,” “Environmental Education,” “Experiential Education,” and many others. This type of education does not include recess or instruction on topics not connected to local community ecosystems, like rainforests. This report uses Outdoor and Environmental Learning or CBEL as a shorthand.

“The information we learn from this comprehensive survey of the field of environmental education and outdoor learning in Maine is critical. We can now make data-informed decisions to build support for educators, better meeting their needs. All Maine youth deserve regular, positive outdoor learning experiences, regardless of where they live, their race, or their socio-economic background. This data helps schools and community programs understand who is and is not gaining access to these learning experiences and what supports are still needed to reach all young people in our state. We are excited to learn what is working and to share those innovative programs and stories with others to inspire further action.”

—OLIVIA GRISET, *Executive Director* of the Maine Environmental Education Association

Success of the 2019 Census

The 2019 CBEL Census gave Maine's outdoor and environmental learning field a tool to facilitate conversations with policymakers, funders, and decision-makers about the importance of this type of education for our youth. A key data point from the 2019 Census, the finding that the most requested professional development topic for educators in Maine is climate change education, was used to justify the passage of the LD1902 Climate Change Education bill. This legislation allocates over \$2 million to fund climate education professional development for teachers and partnerships between schools and community organizations in a 3-year pilot program.

Equally important, data from the Census helps the field see gaps and opportunities and provides measurable benchmarks for progress. By using data to drive decision-making on access to resources and investment of effort, the CBEL field can make more informed, strategic, and targeted efforts to address inequities. This process keeps the CBEL field accountable to goals for ensuring equitable access for all Maine youth.

Finally, the 2019 Census was the first time the CBEL field in Maine truly understood who was working in the sector- including what types of organizations, grade levels of schools, and areas of our state were involved in facilitating programming for youth. This initiative strengthened existing connections within the network and invited new voices. It also resulted in developing The Maine Outdoor and Environmental Learning Directory of environmental learning partners and collaborators, allowing for more collaboration opportunities and partnerships- a key feature of Maine's successful outdoor and environmental learning programs.

Goals

The Census of Community-Based Outdoor and Environmental Learning provides a snapshot of the current state of CBEL throughout Maine. This project intends to replicate this initiative every three to five years to monitor the following questions:

- How is the field progressing over time?
- Where do inequities in access still exist?
- What data-informed professional development offerings and resources are needed?
- How can we support educators in implementing high-quality experiences for youth?

This report achieves the following:

1. Describes challenges to implementing CBEL and identifies creative solutions to overcome barriers.
2. Surfaces inequities in access to CBEL.
3. Illuminates current practices and provides recommendations for improvement.
4. Identifies the professional development needs of the field.
5. Gathers and shares success stories that highlight creativity and innovation across both in-school and out-of-school time settings.



Orientation to the Report

This report is intended to provide practical information to the field that can be immediately applied to support the development of new CBEL initiatives as well as to improve those that already exist and support educators in their work.

We hope that in using this report:

- ▶ Educators will glean information on improving their practice and gain concrete examples of projects in action that can provide inspiration and connection in their educational settings.
- ▶ Administrators will better understand the benefits of CBEL and insights into how to support their staff in implementing these types of programs.
- ▶ Funders will learn more about the needs in the State of Maine and can understand how to direct their support to increase equitable access to this type of learning.
- ▶ State policymakers will better understand the landscape of CBEL in Maine and support these programs, many of which teach youth at a young age what it means to be civically engaged and responsible members of their communities.
- ▶ The general public will gain insight into the innovations happening across varied educational settings in Maine and how to advocate for CBEL in their communities.



Bowdoinham Community School, Lucy Atkins

This report is divided into several sections based on themes:

1. CBEL Landscape Across Educational Settings and Roles
2. Climate Education in Maine
3. Equitable Access to CBEL
4. Productive Partnerships
5. Advancing the CBEL Field

Following this report is a series of case studies of programs across Maine that document innovation in outdoor and environmental learning in diverse settings, audiences, and topics. These case studies are described in a narrative style and include visual representations of the projects. They are inspiring, realistic, on-the-ground examples.



METHODOLOGY AND SAMPLE

Project Leadership

Representatives from the Teach ME Outside project led this survey. They utilized a culturally responsive approach and co-design strategy with multiple layers of stakeholder input to drive the focus of and modifications to the survey. Stakeholders provided feedback through:

- ▶ **VIRTUAL TOWN HALL SESSIONS** - An open invitation to anyone interested in discussing what questions they wanted answered about CBEL and what data they felt was needed to move the field forward. These sessions validated the importance of existing questions from the 2019 survey and directed the development of additional priority areas to explore.
- ▶ **TOPIC ADVISORY GROUPS** - Small groups of representatives from the CBEL field that supported the development of additional question sets in the areas of Equity, Climate Change Education, and Early Childhood Education. These advisory groups met three to four times over a month to develop and revise questions focusing on their topic. These groups also helped to market the survey to potential respondents and discussed initial findings.
- ▶ **EXTERNAL EQUITY AUDIT** - Facilitated by Dr. Monifa Beverly and her team, leaders in culturally responsive and equitable evaluation. The team reviewed the survey instrument and provided feedback for making internal adjustments to our tool to capture better data related to diversity, demographics, etc.
- ▶ **SURVEY BETA-TESTING** - Fifteen members of the environmental learning field, representing different roles, completed the survey before it was released publicly, and provided feedback to ensure clear language and functionality of the instrument.

Survey Development

The CBEL survey instrument focused on five groups representing formal and out-of-school time educational environments: school administrators, classroom and school-based educators, informal and out-of-school time educators, early childhood educators, and those not currently doing CBEL. At the beginning of the survey, participants self-identified into these roles based on the definitions provided (below). Each group responded to questions specific to their role to collect information about the scope of environmental programs occurring in their settings.

CBEL ROLES SURVEYED

SCHOOL ADMINISTRATOR: Most of my work is as a pre-K-12 school administrator (principal, superintendent, etc.).

CLASSROOM OR SCHOOL-BASED EDUCATOR: Most of my work is as a pre-K-12 classroom educator in a school (teachers, AmeriCorps members/volunteers, ed techs, etc.).

INFORMAL/OUT-OF-SCHOOL SECTOR: Most of my work is in informal or out-of-school settings (library, land trust, science center, nature center, afterschool program) as an educator, program director, administrator, etc., that serves youth and/or families with youth, and that may or may not partner with school(s).

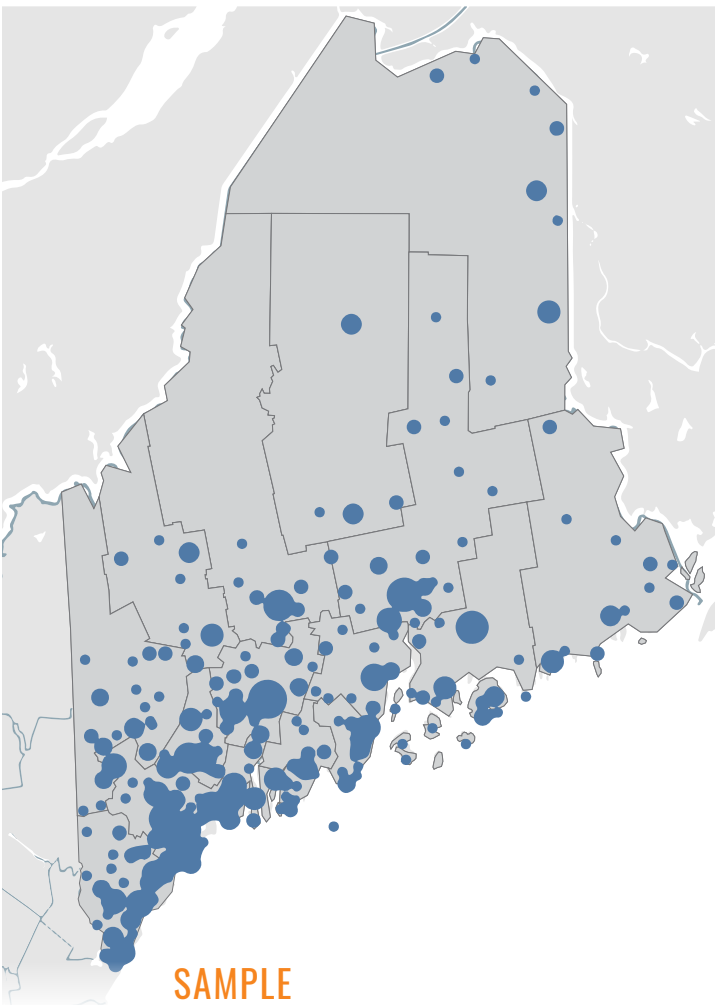
CHILDCARE SECTOR: Most of my work is in a licensed early childhood education setting as a practitioner, educator, staff, or business owner serving children from birth to pre-K and their families.

NOT CURRENTLY DOING CBEL: I am not currently doing any environmental or outdoor learning work with youth.

Recruitment and Survey Administration

The *Census of Community-Based Outdoor and Environmental Learning* was administered online through SurveyMonkey. Our advisory groups and partners played a crucial role in outreach and leveraged their personal networks to spread the word about the Census. Project staff also used lists of groups doing CBEL established from the 2019 Census and contacted individuals who completed the 2019 survey. Key highlights and impacts of the 2019 survey were included in those emails to highlight the importance of collecting new information.

Project staff worked with statewide networking groups to market the survey, including the Maine Land Trust Network, Maine Science Teachers Association, Maine Department of Education, Maine Summer Camps, Maine Roads to Quality, Maine Association for the Education of Young Children, etc. Leaders from environmental nonprofits in Maine, such as The Ecology School, Gulf of Maine Research Institute, Maine Tree Foundation, and Chewonki also reached out to their contact lists of educators to share information about the Census.



SAMPLE

We received responses from 917 individuals from 622 in-school and out-of-school settings throughout Maine. The average completion time for the survey was 15 minutes.

RESPONDENT & SAMPLE INFORMATION



917
individuals



from **622**
in-school and
out-of-school settings

responses represented



37%
of public
schools
in Maine



46%
of public
school units
in Maine



27%
of private
schools
in Maine



55%
of the
land trusts
in Maine



20%
of
registered
Maine Camps



numerous
environmental
and/or
educational
nonprofits
and businesses

CENSUS TIMELINE



DECEMBER 2021
Initial revision of the 2019 survey based on townhall feedback.



APRIL-MAY 2022
Census previewed and further input gained at the NBEC Outdoor Learning Forum and Maine Environmental Education Association Annual Conference.

NOVEMBER 2021
Three virtual town hall sessions to solicit stakeholder feedback on the 2022 CBEL Census.

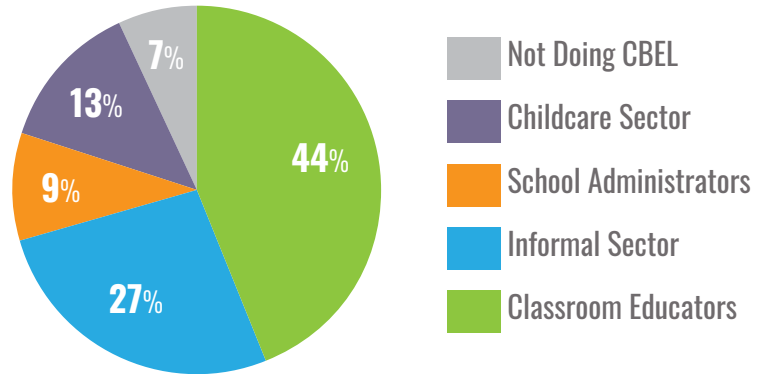
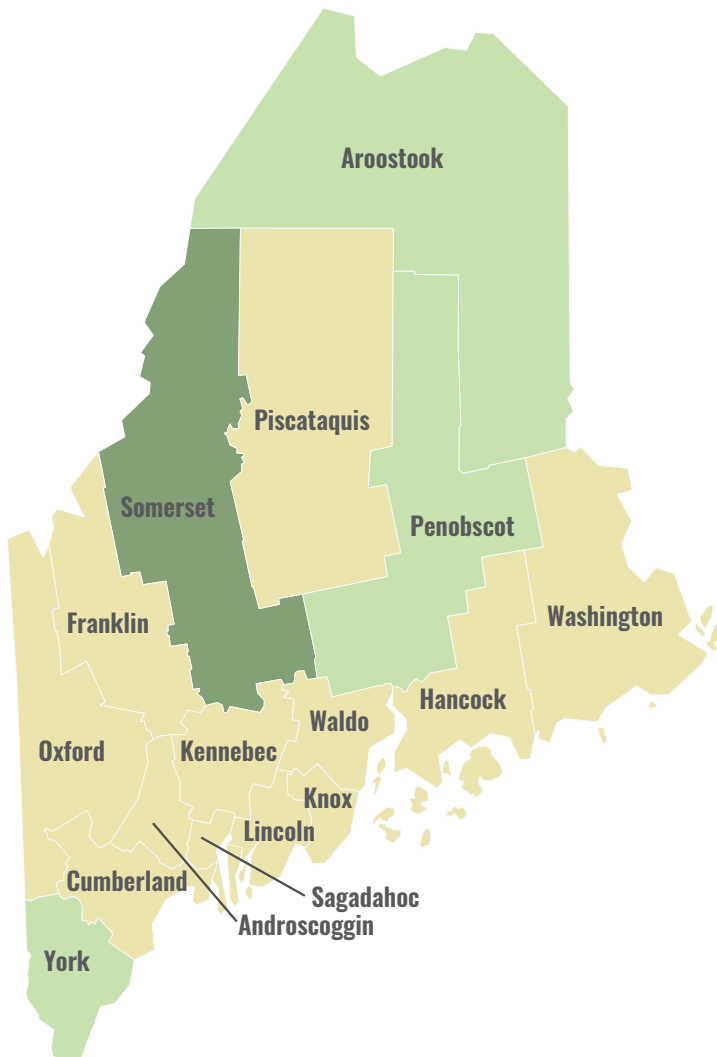
JANUARY-MARCH 2022
Topic Advisory Group meetings for Climate Change Education, Early Childhood Education, and Equity question sets. Feedback incorporated into survey.



JUNE 2022
Equity Audit meeting with Dr. Monifa Beverly and team.

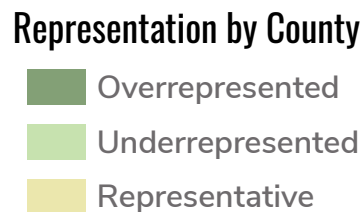


Census Respondents



Responses came from all 16 Maine counties. Responses were generally representative of Maine's population per county. Somerset County was slightly overrepresented, while Aroostook, Penobscot, and York counties were somewhat underrepresented.

Percent of Projects Compared with Percent State Population by County

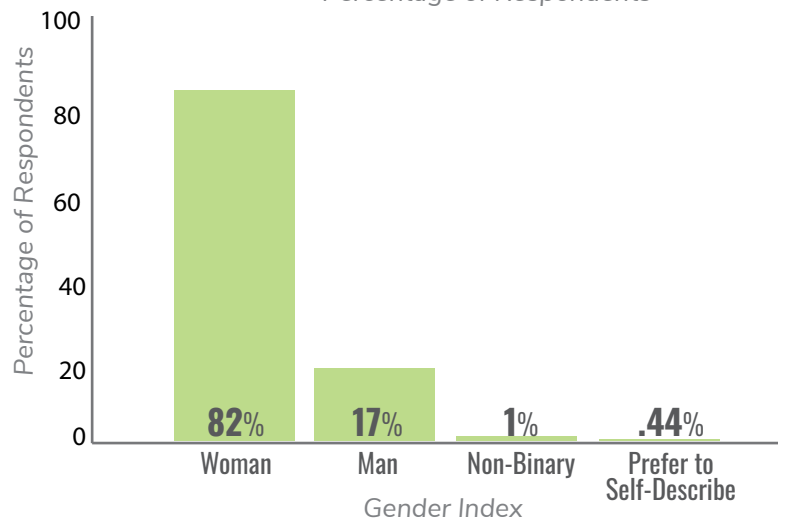
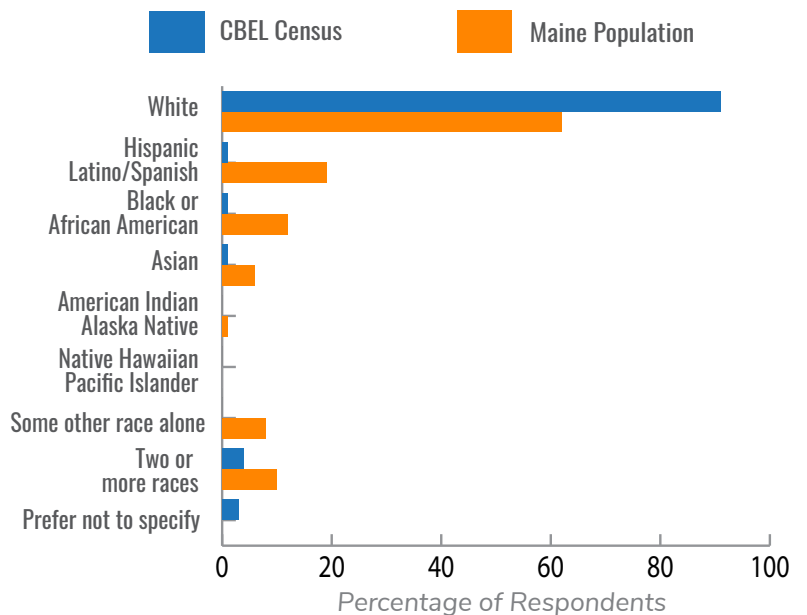




Census Respondents

Beginning in 2022, we requested that respondents to the survey complete demographic information about their gender and race to understand representation in our sector better. Six hundred seventy-five respondents answered the question of which race category best described them: 90.7% of these identified as White, 0.76% Black, 0.46% Hispanic, 0.61% Asian, 0.15% American Indian and Alaska Native, 0.0% Native Hawaiian and Other Pacific Islander, 0.3% Some Other Race, 4.27% Two or More Races, and 2.74% responded with Prefer Not to Specify. Researchers compared the responses to data from the 2020 United States Census in Maine, showing that White individuals were overrepresented in the 2022 CBEL survey while all other groups were underrepresented. Additionally, our sample included an overrepresentation of women (82%).

TOP TO BOTTOM, LEFT TO RIGHT
 Saccarappa Elementary
 Bonny Eagle Middle School
 Upper Kennebec Valley High School
 Otisfield Community School
 Hope Elementary School, Sarah Schrader
 Oceanside High School



••••• CBEL LANDSCAPE ACROSS EDUCATIONAL SETTINGS AND ROLES •••••

The 2022 Census of Community-Based Outdoor and Environmental Learning surveyed a wide range of roles throughout the sector, representing both in-school and out-of-school-time educational environments and childcare settings to gain a holistic overview of the field. Responses came from various schools and organizations, including public schools, private schools, land trusts, environmental nonprofits, libraries, YMCAs, home childcare centers, etc. These various settings play a crucial role in Maine's outdoor and environmental learning ecosystem. We share data insights across each role type surveyed below.

▶ CBEL IN SCHOOLS IN MAINE

To better understand the CBEL landscape in school environments, we reviewed responses from 87 school administrators and 404 classroom or school-based educators.

▶ FINDING #1

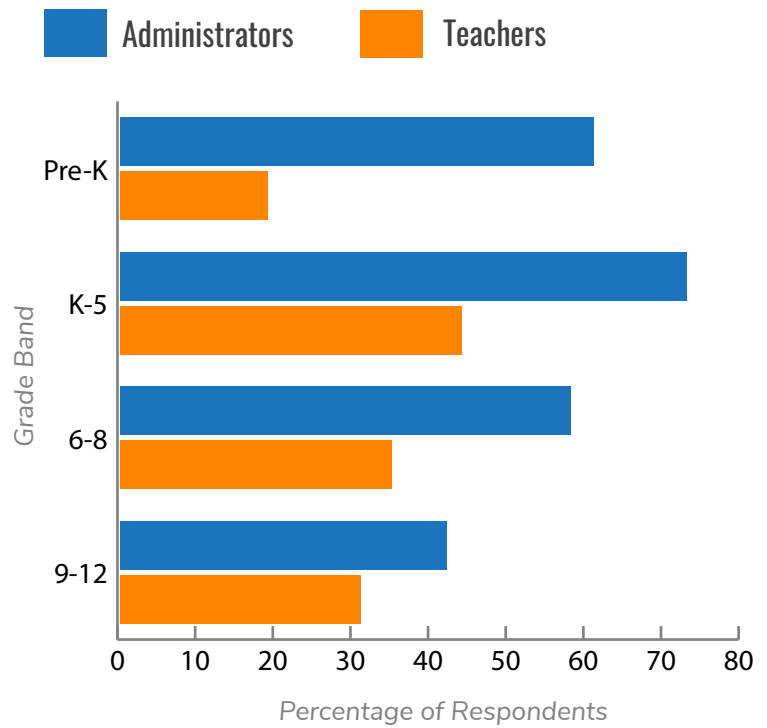
CBEL programs are occurring across all pre-K-12 grade levels in Maine.

School administrators and responding teachers represented all grade levels pre-K through high school, demonstrating that CBEL programs are not only happening in certain grade levels but are well-suited for classrooms across the educational experience. Elementary and middle school administrators and teachers were slightly overrepresented compared with pre-K and high school teachers and administrators.

★ RECOMMENDATION: Highlight Successful Programming at Pre-K and High School Levels

There are opportunities to highlight successful programming at both the pre-K and high school levels, in particular, to elevate programming possibilities and connections to learning standards.

Grades Represented



*percentages do not add up to 100% because administrators and teachers often work across grade bands



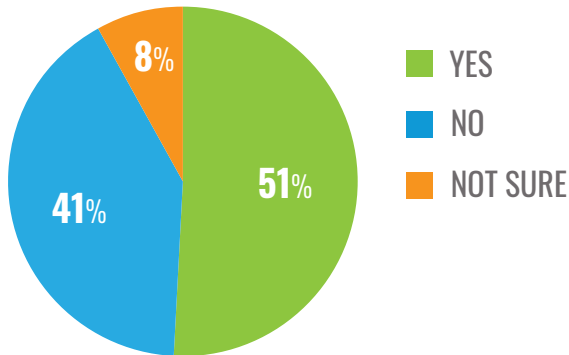
Holbrook Middle School

► FINDING #2

Valuing and prioritizing CBEL.

Over half of responding school administrators indicated that CBEL was defined as a goal in their academic programming. This percentage remained consistent with the 2019 CBEL survey. Additionally, administrators stated that they were investing in outdoor learning infrastructure at their schools, such as nature trails, outdoor classrooms, and school gardens.

Is CBEL a School Goal?



Supports Provided by Responding Administrators

MOST COMMON LEAST COMMON

59% are providing access to outdoor gear

55% are developing and investing in outdoor learning spaces

54% are encouraging their schools to connect with partners

15% cited access and encouragement to connect with Special Education, 504, & IEP teams

16% cited letters, emails, discussions, or other demonstrations of support for environmental and outdoor learning at their school

Voices From The Field: Assistant Superintendent in Cumberland County

"Our 5-year Strategic Plan has specific core beliefs, strategic goals, and action steps that are focused on experiential and outdoor educational programming. Below are some examples of goals/action steps:

- Increase after-school programming at all secondary schools by including more interest-based offerings (e.g., art, music, performance, nutrition, gardening).
- Increase use of outdoor learning spaces (all campuses, outdoor pavilions, trails, gardens, greenhouses, and off-campus learning opportunities).
- Embed more movement and physical wellness opportunities for students at all levels.
- Explore alternative programs that serve to redefine traditional definitions of success (e.g., arts integration/ elevating the arts, farm-to-school programming, environmental stewardship, blended learning).
- Demonstrate a reduction in energy consumption and progress toward more green design practices."

Voices From The Field: Principal in Somerset County

"We have had a number of community members notice the work this year and have received donations from them ... We have started an outdoor learning-specific Facebook page to reach a broader audience. We have also already had three parent events this year where we have offered tours of the outdoor learning area to build awareness and enthusiasm for the program."

★ **RECOMMENDATION:**

Provide Tools for Administrators to Demonstrate Support for CBEL Projects

One of the least common supports from school administrators was providing “letters, emails, discussions, or other demonstrations of support” for CBEL at their school. This strategy is potentially low-hanging fruit to garner further support for CBEL projects across the wider community.

Our communities can do more to model and support school administrators in elevating the innovative programming happening at their schools. For example, they can:

- Provide templates or examples of outreach materials.
- Offer to write press releases.
- Celebrate innovative programming occurring in schools.

These outreach and communication efforts can go a long way towards fostering goodwill, community buy-in, financial resources, and shifting mental models that CBEL is a necessary part of education for all children.



▶ **FINDING #3**

CBEL possibilities on school grounds.

Responding educators have access to, and are utilizing, a variety of outdoor spaces on or close to their schools. Administrators also recognize that accessing nature and the outdoors does not necessarily require transportation but that valuable and meaningful programming can be done on school property. In 2019, the third highest-rated challenge for CBEL identified by administrators was access to transportation. However, this dropped to the fifth-highest-rated position in 2022, presumably because schools are recognizing and investing in nature spaces on their properties.

Responding Teachers Have Access to

RESOURCE

USAGE

68% Nature trails

84% Of responding teachers used available resources more than once a year

67% Natural habitats such as forests, wetlands, etc

16% Used them in most or all classes throughout the school year

55% School gardens

53% Outdoor classrooms

Deer Isle Stonington Elementary School, Mickie Flores

▶ OUT-OF-SCHOOL TIME CBEL IN MAINE

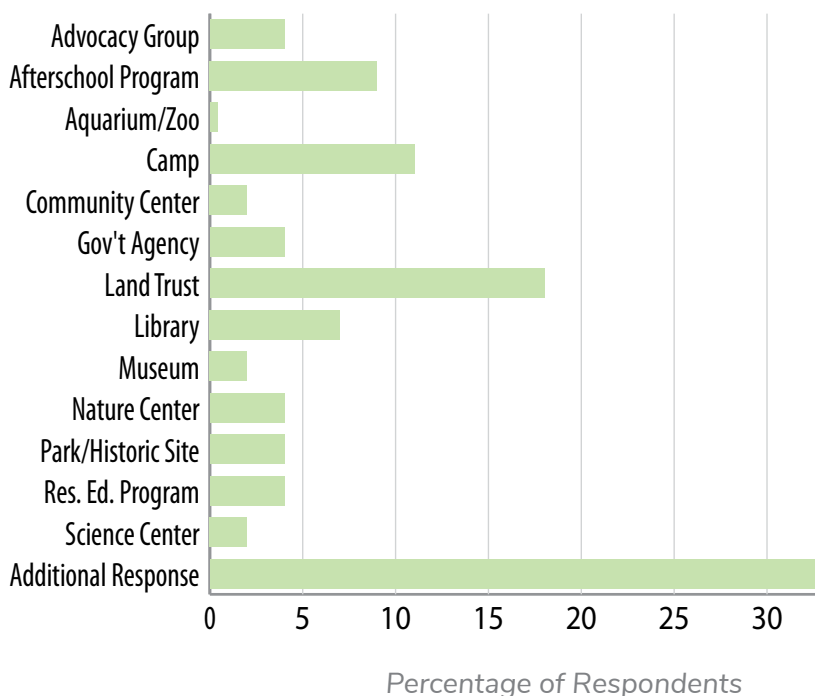
To understand better the CBEL landscape in the out-of-school or informal sector in Maine, we reviewed 245 responses from educators, program directors, and administrators representing organizations, networks, and businesses in Maine.

▶ FINDING #1

Diversity in the out-of-school/informal CBEL sector.

The informal or out-of-school CBEL sector comprises several different types of organizations and businesses. The most common organization types responding included land trusts (18%), afterschool programs (9%), and libraries (7%). Over one-third of responding organizations chose to self-describe in an additional response to this question. Most of these organizations (73%) identify CBEL as a goal in their programming. These organizations serve various ages, including all ages of children, mixed-age/family groups, and adults. These organizations also range widely in size. The median number of youths served per year is 200.

Responding Organization Types



▶ FINDING #2

The impact of the out-of-school/informal CBEL sector.

The total number of youths served across all organizations responding (controlling for duplicate responses) was 163,000. For context, according to the 2020 U.S. Census, the number of youths ages 5-17 in Maine was 185,000. In 2019, the responding organizations served approximately 80,000 youths, which is consistent with the lower response rate overall in 2019.

▶ FINDING #3

Collaboration with schools.

The out-of-school CBEL sector is often partnering with schools to implement CBEL programming, which is increasing over time. In 2019, 52% of responding organizations worked regularly with schools. In 2022, 71% of the responding organizations worked regularly with schools.

The methods used to engage with youths in schools remained consistent from 2019 to 2022. These included programming of relatively short duration, including field trips (50%), fieldwork (49%), and presentations (43%). Research shows that programs of longer, sustained duration have more positive youth outcomes. However, we also know how important shorter programs are for developing a foundational relationship with schools and teachers and as an accessible entry point for this type of learning. In 2019, 31% of responding organizations used multiple session visits, which modestly increased to 39% in 2022.

★ RECOMMENDATION:

Meet Educators Where They Are, But Aspire to Create Sustained Programming

We should aspire to create more sustained programming and collaboration between schools and organizations while at the same time recognizing the need for a suite of options to meet partner educators and communities where they are at, build foundational relationships, and ensure that partnerships are a good fit.

▶ CBEL IN CHILDCARE SETTINGS IN MAINE

To better understand the CBEL landscape in childcare settings, we reviewed 119 responses from practitioners, educators, staff, or business owners serving children from birth to pre-K and their families.

▶ FINDING #1

Childcare landscape and CBEL.

CBEL is occurring across the childcare landscape, from small family childcare programs to larger programs such as those offered through the YMCA and Head Start programs. Childcare respondents to the survey worked with a median number of 39 children. Most sites were the only licensed location, and 24% of respondents indicated that they had more than one licensed location.

A commonality across all these settings is that programs embrace outdoor and environmental learning as a core strategy in early childhood. Sixty-eight percent of respondents said they incorporated environmental and/or outdoor learning into their programs “all the time.”

★ RECOMMENDATION:

Invest in CBEL in Childcare Settings

Childcare settings are embracing CBEL and have the time and flexibility to do so. Investments in quality CBEL programming and professional learning for educators in early childhood can potentially have incredibly high returns for equitable access for Maine youth.

▶ FINDING #2

Childcare investments in CBEL.

Childcare settings often have access to CBEL infrastructure and equipment, including playgrounds (88%), gardens (72%), and outdoor classrooms (72%). Additionally, the childcare sector is investing in professional learning and the development of outdoor spaces.

Most Common Supports Provided

46% Professional development opportunities

45% Scheduled time to plan for outdoor and environmental learning activities

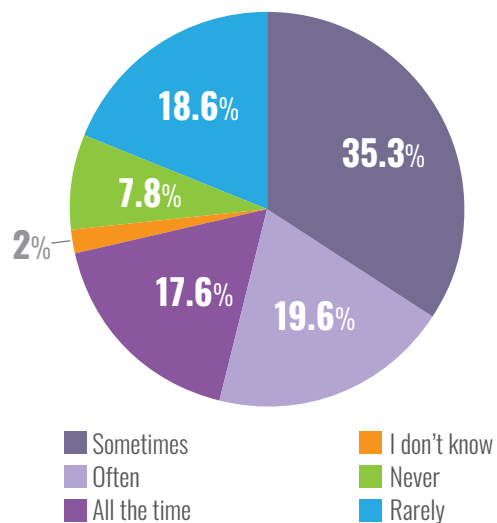
38% Development/investment in outdoor learning spaces

▶ FINDING #3

Parent, caregiver, and family member involvement in CBEL.

Over 70% of responding childcare educators report that their programs incorporate parents, caregivers, and family members regularly (all the time, often, or sometimes) in their outdoor and environmental learning work.

How much does your program/center incorporate parents, caregivers, and family into your early childhood environmental and outdoor learning work?



South Bristol Elementary School

▶ CHALLENGES AND CREATIVE SOLUTIONS ACROSS THE CBEL FIELD




















Despite significant investment in infrastructure, schools still face persistent challenges to implementing CBEL. For teachers and administrators, funding and scheduling/time to plan and implement CBEL projects were the highest-rated challenges. Teachers also felt challenged by needing more outdoor equipment for projects. At the same time, administrators identified the challenge of pedagogical expertise, or teachers' abilities to understand and instruct their students in CBEL content. Both teachers and administrators also cited buy-in at their schools as another significant challenge.

The out-of-school CBEL sector experiences some of the same challenges as educators conducting CBEL in schools—namely scheduling/time and funding. However, they differ in that additional top challenges in 2022 included transportation and challenges associated with the COVID-19 pandemic.

Despite the high adoption of CBEL in the childcare sector and investment in professional learning and infrastructure, there continue to be unmet needs and areas to support continued growth. Like schools and organizations, childcare settings identified their top challenge as funding. Additional challenges include the availability of outdoor equipment and content expertise in CBEL topics. Notably, time was not identified as a top challenge as it was in some of the other settings. Many childcare educators also stated that they had “no challenges,” so their third highest-rated challenge is “none.”

Despite these challenges, there are creative solutions that educators across Maine are utilizing to move CBEL projects forward. The main solutions that educators are using to address their challenges include fundraising or writing grants to support projects (25%), utilizing creative scheduling or incorporating outdoor and environmental learning into the regular school schedule (14%), utilizing

Top Challenges to Implementing CBEL Across the Sector

	#1 Challenge	#2 Challenge	#3 Challenge	#4 Challenge
CHILDCARE	FUNDING 	AVAILABILITY OF OUTDOOR EQUIPMENT 	NONE	CONTENT EXPERTISE 
SCHOOL-BASED EDUCATORS	SCHEDULING /TIME 	FUNDING 	AVAILABILITY OF OUTDOOR EQUIPMENT 	COLLEAGUE BUY-IN 
SCHOOL ADMINISTRATORS	FUNDING 	SCHEDULING /TIME 	PEDAGOGICAL EXPERTISE 	TEACHER BUY-IN 
OUT-OF-SCHOOL SECTOR	SCHEDULING /TIME 	FUNDING 	TRANSPORTATION 	COVID 
OVERALL	SCHEDULING /TIME 	FUNDING 	TRANSPORTATION 	AVAILABILITY OF OUTDOOR EQUIPMENT 

partnerships (12%), and integrating CBEL into the curriculum and using interdisciplinary strategies (11%). Below are some specific

examples of how educators overcome the challenges they experience:

TOP CHALLENGES & SOLUTIONS

SCHEDULING/TIME

“To support scheduling and timing, I align environmental topics with math and science curriculum.”

—Classroom educator in Hancock County

“The pacing is tough running the program as a special for pre-K-5th grades, in 40-minute intervals. Often, there is less than 5 minutes of transition time between lessons, so I have made sure that all of my learning spaces and materials are easy to set up and remain accessible throughout the day.”

—Classroom educator in Cumberland County

FUNDING

“Since the school district does not fund our garden efforts or allow for any extras in the way of materials for outdoor learning, we fundraise, and I write grants. However...grant writing can be consuming for a busy classroom teacher.”

—Classroom educator in Franklin County

“Instead of going to the apple orchard as we did before price increases (of travel insurance, cost of field trips, lack of parent availability to chaperone, etc.), we now have an Apple Festival right at the preschool with apple games including apple toss, bobbing for apples in individual bowls, apple crafts, etc...”

—Childcare educator in York County

BUY-IN

“My principal supported outdoor learning and provided PD for our staff that did increase staff buy-in and my pedagogical expertise.”

—Classroom educator in Franklin County

“To increase colleague buy-in, the Ed Tech who assists in this program and I use some of our planning time to lead and support outdoor experiences for kindergarten, first, and second-grade classes.”

—Classroom educator in Knox County

AVAILABILITY OF OUTDOOR EQUIPMENT

“Our school does not have a formal outdoor classroom. To solve this problem, we use 5-gallon buckets as our outdoor class seating, which allows for everyone to bring the materials needed, have a place to sit, and allows for us to move to various locations when needed.”

—Classroom educator in York County

“We have become very resourceful in creating outdoor learning environments, including utilizing donated stumps as seats for children to participate in circle time. A winter gear drive has allowed us to outfit children with additional winter weather gear to gain access to the outdoors in even the coldest temperatures.”

—Childcare educator in Sagadahoc County

PEDAGOGICAL EXPERTISE

“To better supplement my inexperience in some of the content areas, I facilitate learning experiences with a myriad of organizations we have in our area.”

—Classroom educator in Hancock County

“We have identified a lead teacher and a couple of other educators to support classrooms in utilizing more nature-based education/nature spaces for their classrooms to explore.”

—Childcare educator in Kennebec County

★ RECOMMENDATION:

Lower Barriers for Educators to Access Resources to Support CBEL

Many creative solutions to identified barriers require significant investment of time and resources by the educators themselves for writing grants, reenvisioning their curriculum, and finding and nurturing partnerships. Knowing how limited time is for educators and how many additional responsibilities they are juggling, efforts should be made to reduce barriers further, for example:

- Streamlining grant applications and removing cumbersome reporting requirements.
- Building in additional time for planning and implementing CBEL projects.
- Approaching teachers with partnership opportunities.

ASSESSMENT OF CBEL PROJECTS

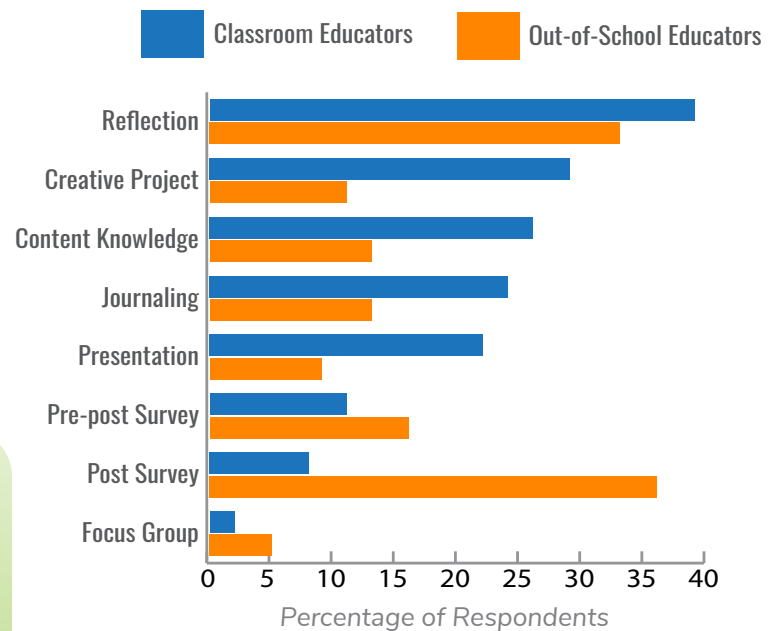
In 2019, a little over half of CBEL projects were evaluated, which remained consistent in 2022. Both classroom and out-of-school educators had similar evaluation rates, but their methods differed. Classroom educators commonly utilize reflection activities, creative projects, and content knowledge assessments to evaluate student impacts. Out-of-school educators were more likely to use post-surveys than classroom educators and also utilized reflections, pre-post surveys, and journaling activities.

RECOMMENDATION:

Prioritize Evaluation in the CBEL Field

The CBEL field needs to prioritize evaluation to iterate on and improve programming and better understand student outcomes. Evaluation of CBEL projects has not changed since 2019 and indicates that more support is needed for evaluation in the sector.

Evaluation Methods Used in CBEL Projects

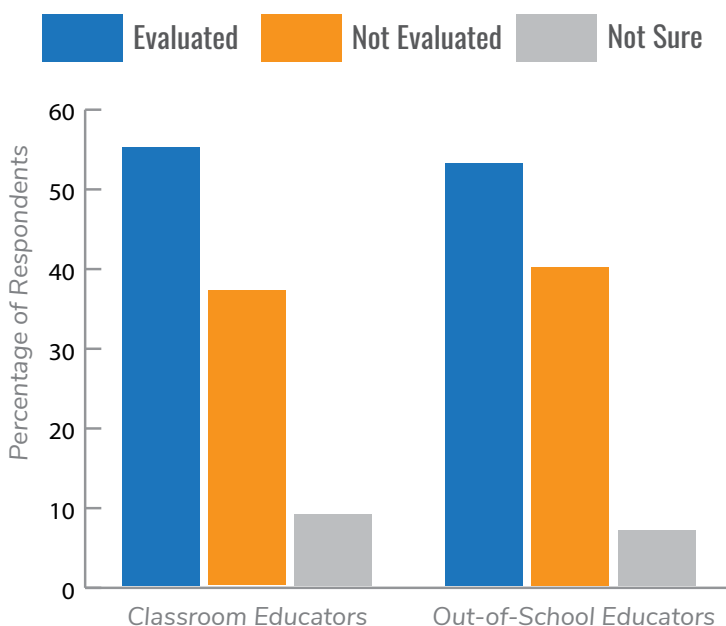


Standards in CBEL Projects

The 2019 CBEL Census found that more school-based projects were aligned to the Next Generation Science Standards (NGSS) compared to organization-based projects. Additionally, out-of-school/informal organizational respondents were more likely to state that they were “unsure” whether their projects were aligned with the NGSS. In 2022, we expanded this question to look at CBEL project alignment with other academic standards, including Common Core Math and English Language Arts standards.

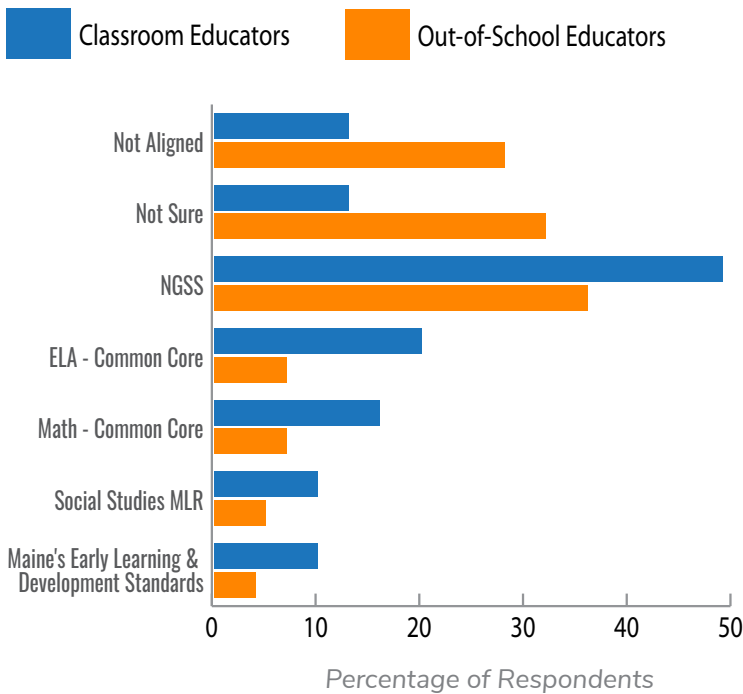
Similar to 2019 respondents, out-of-school respondents were more likely to respond that they were “not sure” if their projects were aligned to academic standards compared with classroom teachers, demonstrating a persistent gap in knowledge between in-school and out-of-school time educators. The NGSS standards were the standards that projects were most likely to be aligned with, with close to 50% of classroom educators and 35% of out-of-school educators indicating their projects were aligned, demonstrating a solid connection between CBEL

CBEL Project Evaluation



projects and the sciences. However, educators are also connecting their projects with other cross-discipline academic standards, with classroom educators consistently demonstrating higher alignment than out-of-school educators.

Academic Standards in CBEL Projects



★ RECOMMENDATION:
Highlight Interdisciplinary Applications of CBEL Projects

Support is needed to highlight interdisciplinary applications of CBEL projects as well as to support out-of-school educators in better understanding how their projects are aligned or can align with academic standards used in schools, especially to support collaborative efforts between schools and organizations.

▶ OPPORTUNITIES TO EXPAND THE FIELD

To understand better opportunities to expand the CBEL field, we collected data from 62 respondents who stated that they were not currently doing any CBEL programming in their setting.

Educators not currently doing CBEL are interested and ready to engage, given proper support. A majority (84%) of the responding educators not presently involved in CBEL were interested in learning more. They identified the following needs to be able to engage:

- Information about outdoor and environmental learning, in general.
- Financial support.
- Access to resources and materials.

★ RECOMMENDATION:
Broaden the CBEL Network

There is a pool of educators in Maine who are willing and ready to engage in CBEL and need some structure and support to do so. Efforts should be made to support these educators in particular by, for example:

- Providing introductory professional learning opportunities.
- Connecting them to the larger statewide network of resources.
- Continuing to provide funding and support for CBEL projects so they can get the jump start they need to be successful.



Climate education was highlighted in the 2019 CBEL Census as the top professional development need by nearly 20% of teachers (and 14% of respondents overall). In 2022, the LD1902 \$2.1 million Climate Education Bill passed in the Maine legislature, which provides grants for high-quality professional development for teachers designed and carried out in partnership with community-based nonprofit organizations. In the 2022 CBEL Census, climate education remained a top professional development need for educators (fourth highest-rated). We also asked more specific questions related to climate education: What is currently occurring across CBEL projects in Maine, what is needed, and where there are areas to grow and develop.

FINDING #1

Climate education in Maine has disparities between individual needs and available supports.

Across all respondents, climate education professional development was the fourth highest professional development need. However, only 9% of respondents stated they were currently leading or interested in leading climate education professional development sessions. Therefore, a significant disparity exists between identified needs in the CBEL field, generally for climate education, and the availability of training.

In schools, there were disparities between how teachers valued climate education, how administrators valued it, and how teachers perceived their schools to value it.

- 30% of classroom educators stated that incorporating climate change into their instruction is a **“high priority”**
- 14% of classroom educators stated that incorporating climate change education is a **“high priority” at their school**
- 20% of school administrators say incorporating climate change education is a **“high priority” at their school**

★ RECOMMENDATION:

Invest in Innovative Climate Education Professional Development Models

Professional development in climate education is needed across the sector and can come from many different avenues including:

- Informal providers and organizations providing training for educators.
- Higher education institutions developing certifications to support pre-service teachers and offering continuing education credits.
- Schools sharing success stories and strategies in climate education with each other.

FINDING #2

Climate education is a higher priority for out-of-school educators compared to school-based educators or childcare educators.

Out-of-school educators prioritized climate education more than school educators in the 2022 CBEL Census. Among out-of-school educators, 72% stated that climate education was a high or moderate priority compared to 59% of school educators. At 51%, this is even lower for childcare educators.

★ RECOMMENDATION:

Support Cross-Sector Climate Education Partnerships

Out-of-school educators are poised to be strong partners for both classroom and childcare educators in supporting climate education with their high motivation and drive to incorporate it into their instruction. Cross-sector partnerships in education should be encouraged to support climate education in Maine.



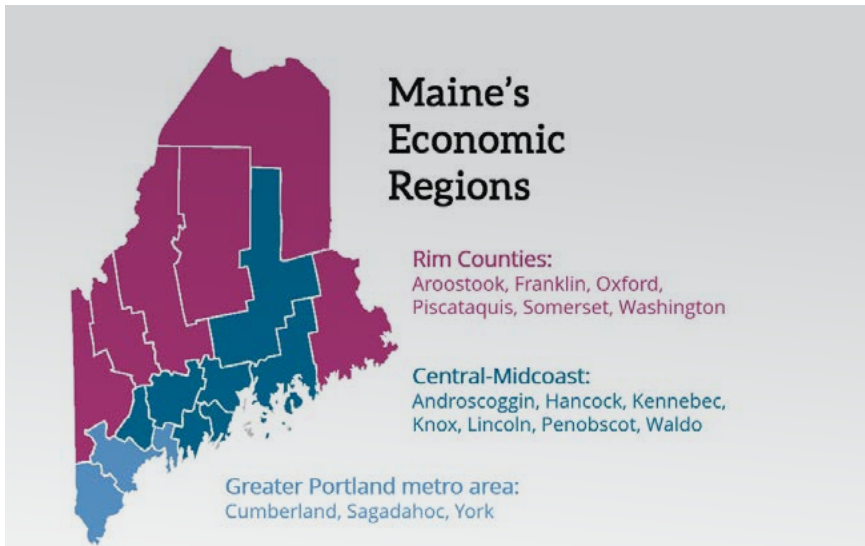
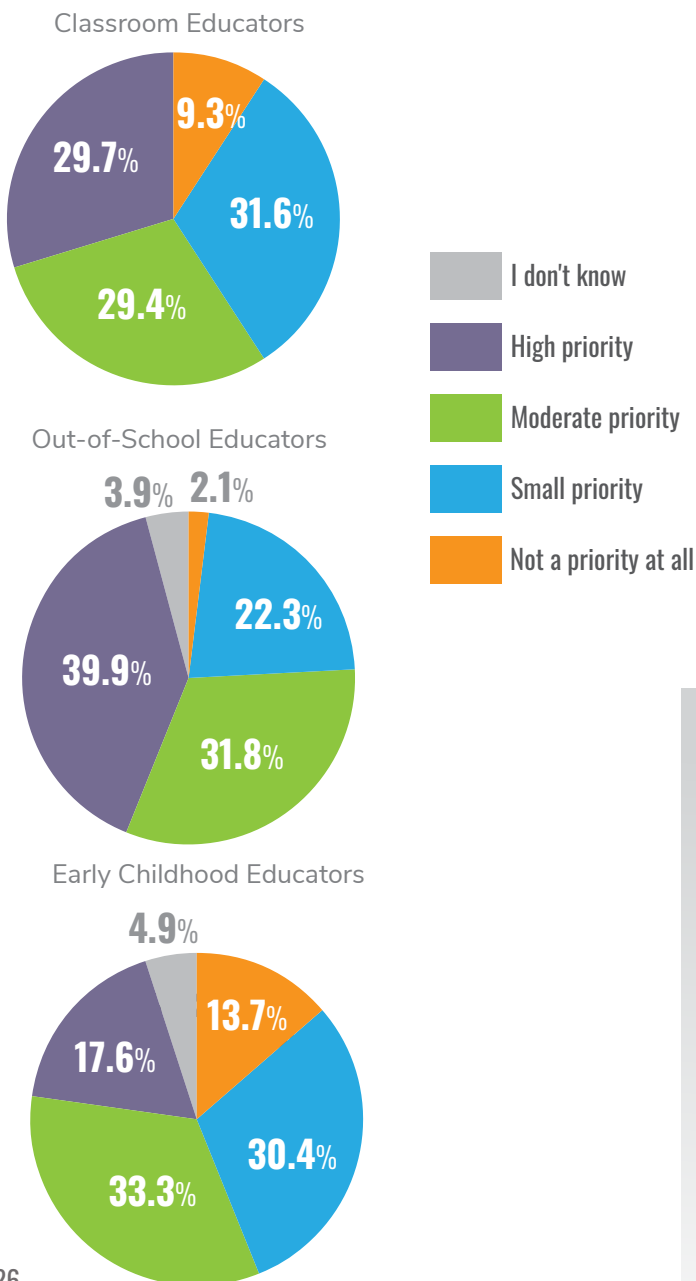
FINDING #3

Respondents vary widely in their strategies and comfort with climate education, but there are regional patterns.

To see how Maine educators were using common climate education strategies, their beliefs about climate education, and what resources were available to them, we asked a series of Likert-scale rating questions. Educators were asked to rate each item on a scale from “Strongly Agree” to “Strongly Disagree.” Educators vary widely in their strategies and beliefs about climate education. Educators agreed the most with the statement, “I focus on the science when teaching climate change”; they disagreed the most with the statement, “I have a peer support network to help me navigate climate education.”

There were also some regional patterns in the responses to these statements. This study investigated regional differences using a county breakdown from the Maine Center for Economic Policy. **The Rim Counties** tend to be more rural and traditionally reliant on natural resource industries. **The Central-Midcoast Counties** have a significant tourism sector and are anchored by larger towns and cities, including Lewiston-Auburn, Augusta, and Bangor. **The Greater Portland Metro Area** of Cumberland, Sagadahoc, and York Counties contained over half of Maine’s economy in 2015 and are heavily influenced by their proximity to Portland.

How much of a priority is incorporating climate change education in your instruction?

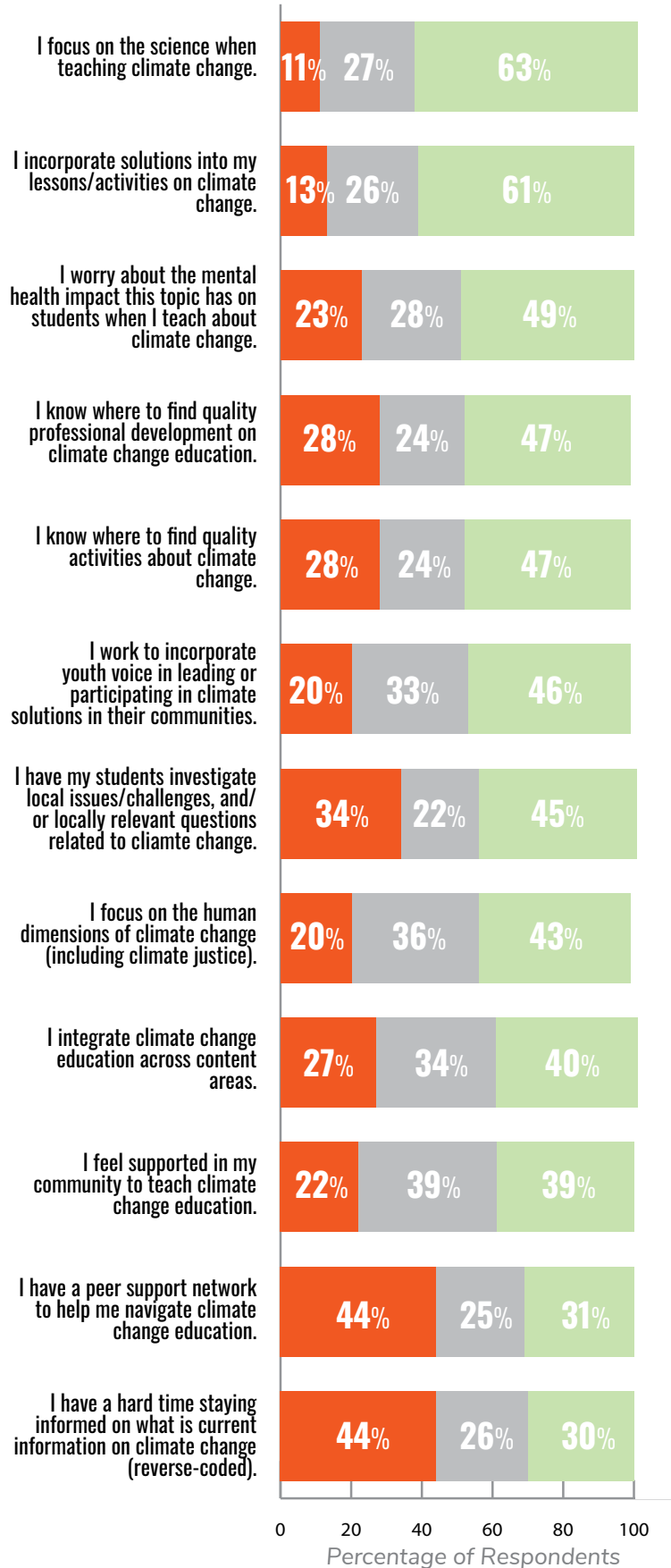


Five items significantly differed across the regions, with the Greater Portland Metro Area reporting the highest agreement, followed by Central-Midcoast, and the Rim Counties reporting the least agreement. The items include:

- I incorporate solutions into my lessons/ activities on climate change.
- I worry about the mental health impact this topic has on students when I teach about climate change.
- I work to incorporate youth voice in leading or participating in climate solutions in their communities.
- I focus on the human dimensions of climate change (including climate justice).
- I feel supported in my community to teach climate change education.

★ RECOMMENDATION:
Support Regionally and Culturally Appropriate Climate Education

Climate education support should be regionally-targeted and culturally appropriate but grounded in some fundamental practices that educators know to be effective, such as focusing on local impacts and building up a stewardship ethic and care for nature in students at early ages. What climate education looks like in Portland may differ from that in Caribou. For example, climate education in Portland may focus on observing the local impacts of flooding across vulnerable sections of the city and how that affects residents, businesses, etc. In contrast, Caribou may focus on changes over time in the snowpack and potential impacts on the snowmobiling industry.



Strongly Agree or Agree Neither Agree Nor Disagree Strongly Disagree or Disagree

FINDING #4

Some educators are developing effective climate education strategies, but many are still struggling.

When asked to provide resources, techniques, or strategies for effective climate change education, the following emerged as top themes:

- Enlisting the support of a CBEL community partner.
- Mentions of existing educational resources or lesson plans.
- Focusing on local impacts.
- Making observations of change.
- Fostering a connection to nature/the environment.

These strategies or resources remained consistent across the different regions of Maine, with community partners being the top identified strategy in all regions.

The top CBEL content areas mentioned in the solutions included weather, ocean effects, gardening, forests, and aquaculture.

★ RECOMMENDATION:

Build Networks of Support for Climate Educators

One area of growth across all portions of the state is building networks of educators to support and learn from each other in climate education – something that is currently lacking across the state overall but identified as an important strategy for moving forward with climate education.

Voices From The Field: Climate Education Strategies

“I don’t view or speak on climate as its own unit of a curriculum, but as an aspect of every unit taught because it impacts every aspect of what I teach. Local based examples and information has always made climate more tangible for students and adults.”

—Out-of-school educator in Kennebec County

“Don’t say the phrase “climate change” until you create a picture of how local ecosystems are being disturbed. The impact of warming hit home after students learned how vital indicator species are in vernal pools and how many species are intertwined and rely on each other and vernal pools. The fact that some pools had fewer samples found and their temps were warmer got them thinking about what happens when pools get warmer every year. Pretty powerful.”

—Classroom educator in York County

“Gulf of Maine Research Institute has a resources area (teach.gmri.org) that is available for educators to use to find activities and data. I always encourage students to look at the data and try to give balanced views on climate change. I do not focus on it as a rule except to look at changes that students and I may have noticed locally.”

—Classroom educator in Lincoln County

“Keeping the topics local and immediately observable, like the tree outside the window, allows kids to understand and see relevancy in learning about climate. Just observing the tree can provide all sorts of information about carbon storage, greenhouse gasses and phenology. Showing and using real data sets in class and/or articles about real event.”

—Classroom educator in Somerset County





Notably, 24% of respondents to an optional question about climate education strategies did not provide a strategy but reiterated persistent challenges, needs, etc., demonstrating that despite the successes that some educators are having in navigating different effective strategies, there are still many educators who are lost and need support.

Voices From The Field: Climate Education Challenges

“I think widespread PD to understand NexGen needs to happen at a state-wide level. There is an extremely limited understanding of these standards at the elementary level, and no time given for PD at a school or district level.”

—Classroom educator in Oxford County

“Climate change work is not yet being incorporated in a way that feels in proportion to the importance and urgency that it should have in our curriculum.”

—Classroom educator in Cumberland County

“At the moment, we don't actively talk about climate change during youth programming. I'm open to the idea, but I honestly try to cover lots of different topics and it's about to be just me, so I'm sort of feeling a little anxious about everything.”

—Out-of-school educator in Cumberland County

“I'm a pre-K teacher and would like to learn what I could do for climate change that would be age appropriate.”

—Classroom educator in Oxford County

“Teaching climate change to my students can be very challenging. It's very abstract for them to understand how outside factors are changing the world in which we live.”

—Classroom educator in Somerset County

EQUITABLE ACCESS TO CBEL

In the 2022 CBEL Census, we asked more specific questions about how students across Maine do or do not have access to CBEL programming and what support educators need to engage all students in CBEL. The 2019 Census focused mainly on socioeconomic status and geography of access. In 2022, we asked questions about specific populations of students, including low-income students, BIPOC (Black, Indigenous, and People of Color) students, and students with disabilities.

FINDING #1

Educators across Maine define equitable access in different ways.

Educators were asked to share their definitions of equitable access in their school or organization's outdoor and environmental learning work. Educators agreed that equitable access means all students should have CBEL opportunities, regardless of their background, socioeconomic status, physical abilities, etc. Educators had varied examples of what equitable access looks like in practice. For example, some focused on providing specific support for students (ensuring warm clothing, accessible outdoor spaces, etc.), while others focused on equitable teacher preparation to support their students. Many educators also focused on fostering a culture of safety and belonging in the outdoors for all students.

Voices From The Field: What does equitable access in CBEL mean to you?

"All students would have access during the regular school day and would be provided with all needed equipment and support to have access to that place. Their backgrounds and cultures would be considered when planning and designing units. Their ideas and questions would be incorporated into the lessons."

—Classroom educator in Hancock County

"I think there are two parts: reducing barriers like cost, travel, gear requirements, physical accessibility, etc., but also outdoor and environmental learning that is inclusive, culturally relevant, reflective of student experiences, etc."

—Out-of-school educator in Cumberland County

"Examining resources at all schools, PreK-12, working with school leaders to elevate environmental and outdoor educational programming, and establishing accountability measures to ensure growth in this area."

—School administrator in Cumberland County

"Providing high-quality outdoor gear to all students and staff at no cost and tuition assistance to meet the financial need of families to participate in programs, as well as supporting teachers with professional development and families with parent education."

—Childcare provider in Aroostook County

FINDING #2

CBEL educators in Maine have access to community partners, online and in-person trainings, and general professional development to support them in learning more about equitable access. However, they need more time and funding to engage with these resources.

Across Maine, responding educators stated that they had access to some support for learning more about equitable access but also had unmet needs. Educators often had access to community partnerships, local resources, online trainings, and general professional development opportunities. However, they stated they needed time and funding to engage with these resources and additional professional development. Additionally, educators in the Greater Portland Metro and Central-Midcoast regions of Maine identified a top need for a statewide comprehensive strategy or discussion about equitable access.

★ RECOMMENDATION:

Fund Sustained Professional Development Focused on Equitable Access to CBEL

Educators need more funded professional development opportunities to explore different strategies for providing equitable access to CBEL for all students with time to incorporate learnings and connect with others. Professional Learning Community models that establish trust and community between educators over time for shared learning rather than one-off trainings are important to invest time and resources into.

Voices From The Field: Available Supports & Needs for Improving Equitable Access

“[Support includes] EcologyShifts, MEEA monthly calls and resources, North American Association for Environmental Ed workshops and conference, Wabanaki Reach – I think we need many more opportunities to learn and discuss all aspects of accessibility in this sector. We need funding to support this work as well.”

—Out-of-school educator in Cumberland County

“We need to work on creating culturally responsive curriculum and incorporating Indigenous perspectives and knowledge without being extractive.”

—Out-of-school educator in Cumberland County

“We have access to a lot of resources through organizations like MMSA and MEEA, but often lack the time and energy to follow through on these.”

—School administrator in Somerset County

“It would help if there were more PD focused on learning about equitable access as well as more common planning time to collaborate and brainstorm with other educators to make this happen. Funding and time are major factors that are lacking.”

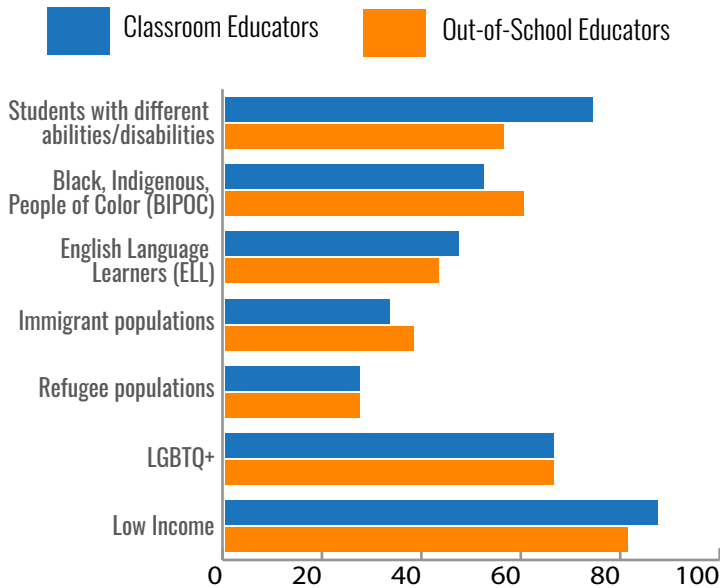
—Classroom educator in Waldo County

FINDING #3

Educators are the most experienced with engaging low-income students in CBEL.

In rating how experienced responding educators are with engaging varying populations of students in CBEL, both in-school and out-of-school time educators were most experienced with engaging low-income students. Classroom teachers had more experience with engaging students with different abilities or disabilities in CBEL compared to out-of-school educators. Both classroom educators and out-of-school educators were equally experienced in engaging LGBTQ+ students. Both categories of educators had limited experience (less than 50% rating themselves as moderately or very experienced) with engaging English Language Learners (ELL), immigrant, and refugee populations in CBEL.

Percentage of respondents who said they were "moderately" or "very" experienced with engaging the following populations in CBEL



★ RECOMMENDATION:
Invest in Specific Training for Engaging Various Populations of Students in Culturally Responsive CBEL Methods

Educators overall need training to support all students as Maine’s demographics change and get more culturally diverse. Classroom and out-of-school educators could benefit from more experience with immigrant, English Language Learners, and refugee populations. Adapting to different student learning styles is a skill educators can build with training and access to resources such as culturally responsive curriculum materials.

Out-of-school educators are less experienced than classroom teachers in working with students with disabilities, different abilities, or chronic conditions. The field needs training on how to build CBEL programming to be inclusive of students’ varying needs so all can benefit from CBEL experiences.

FINDING #4

Out-of-school and classroom-based educators identified different supports needed to better engage all students in CBEL.

When asked what support was needed to better engage all students in CBEL, there were some differences in needs across the types of educators and students they serve. Both classroom and out-of-school time educators identified financial support as the top need for engaging low-income students.

For students with different abilities/disabilities, classroom educators stated that they equally needed scheduled time to learn and explore with this population of students and investment in outdoor spaces to be more accessible. Out-of-school educators, who stated they were less experienced with this population, needed professional development.

Classroom educators had some differentiated needs for additional populations of students, as evidenced in the chart. For out-of-school educators, they identified that their greatest need was community partners who could connect them with students and resources for serving them.

Educators' Top Support Needed to Better Engage with Various Populations of Students

	Out-of-School	Classroom
Students with Different Abilities/Disabilities	Professional development	Scheduled time to learn/explore & Investment in outdoor spaces
BIPOC students	Connections with community partners	Scheduled time to learn/explore
ELL students	Connections with community partners	Professional development
Immigrant students	Connections with community partners	Culturally responsive curriculum
Refugee populations	Connections with community partners	Scheduled time to learn/explore
LGBTQ+ students	Connections with community partners	Culturally responsive curriculum
Low-income students	Financial support	Financial support

PRODUCTIVE PARTNERSHIPS

The importance of partnerships in CBEL projects was a significant finding in the 2019 Census. We explored this further in 2022 to better characterize partnerships' who, what, where, when, and why.

FINDING #1

Partnerships remain a significant characteristic of CBEL programming in Maine.

A majority (75%) of respondents had one or more partners engaged in their CBEL programming.

Partners most often contributed:

- Environmental expertise.
- Curriculum support.
- Equipment/supplies.

FINDING #2

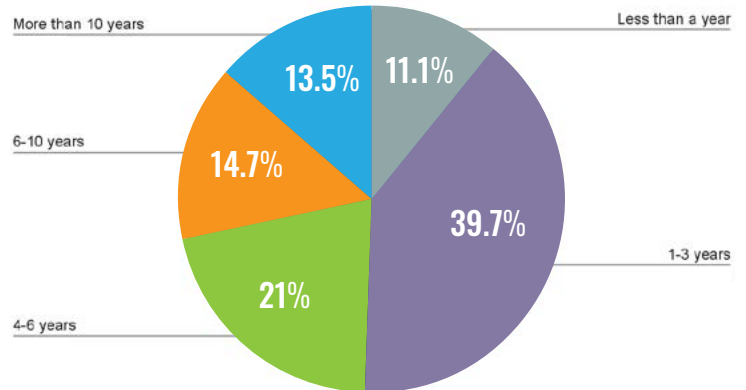
Half of the most successful partnerships in Maine were long-standing relationships and local.

Successful partnerships in Maine are often long-standing relationships, with half being established for over three years. Successful partnerships were also often local, with over 50% of partners located in the same community or workplace as the respondent. Partners most commonly communicated with each other monthly.

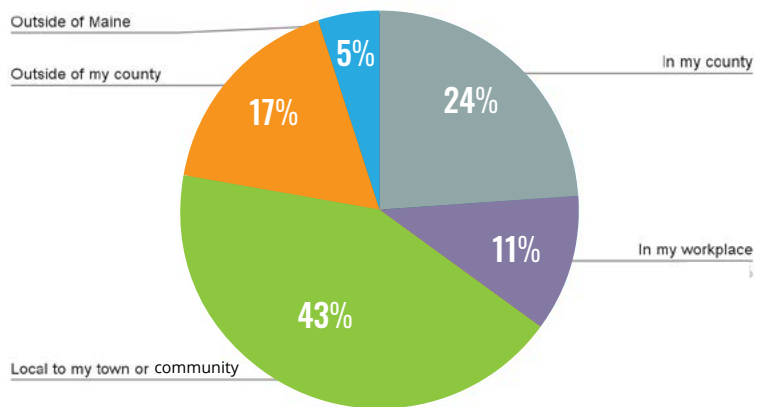
★ RECOMMENDATION: Commit to Long-Term Funding to Support Effective CBEL Partnerships

Funders must commit to long-term funding to support establishing and maintaining partnerships over time. Sustained funding where partnerships are needed or already flourishing is important, knowing that the most successful partnerships are well-established.

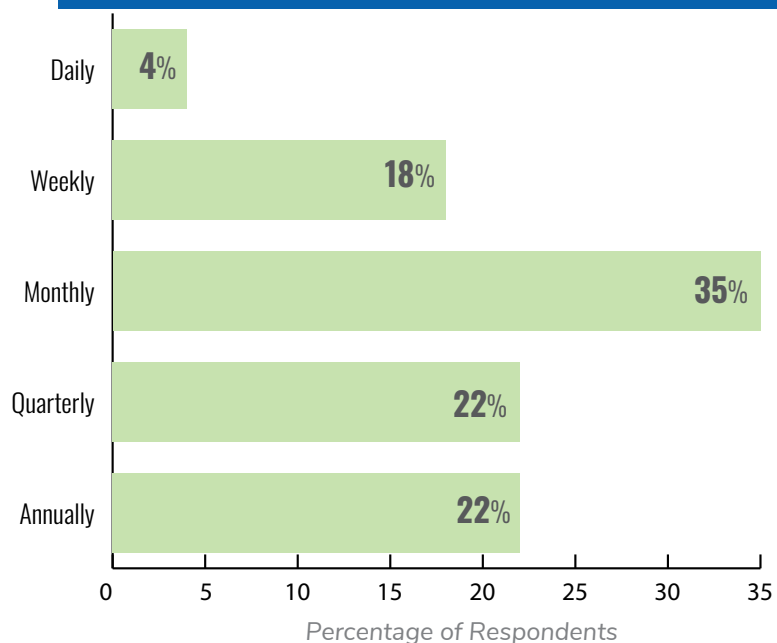
Length of Partnership



Location of Partners



Frequency of Communication with Partners



FINDING #3

Partnership opportunities vary across different regions of the state.


Partnership opportunities are more prevalent in more southern portions of the state. Respondents from the Central-Midcoast counties had the highest average number of partners (9.6 partners), while the Rim counties had the lowest, about half as many as the other areas of the state at 4.9 partners.

RECOMMENDATION:
Prioritize Partnership Support to the Rim Counties

Resources should be prioritized to support the development and maintenance of partnerships in the Rim Counties, which have nearly half as many partners on projects compared to other areas of the state. Additionally, organizations and networks with the capacity to expand their reach should develop sustained and meaningful relationships in those areas to support CBEL projects.

Average number of CBEL partners by Maine region

Rim Counties	4.9
Central-Midcoast	9.6
Greater Portland metro area	8.7



FINDING #4

Funding and time are needed to sustain more partnerships.

When respondents were asked what they required to sustain more partnerships in their CBEL work, they identified the persistent problems of lack of sufficient funding and time. Additionally, they identified a need for additional networking opportunities to locate partners, additional staff to manage partners, and administrative support for fostering partnerships.

**Voices From The Field:
 How to Support More Sustained Partnerships**

“More funding to pay stipends for planning and collaboration ... the understanding that good partnerships take a lot of time, so having longer-term funding that supports that time to build trust and relationships not just focused on concrete project outcomes.”

—Out-of-school educator in Cumberland County

“More staff to keep relationships going and bridge connections to other related work so we don’t have competing programs but instead, complementary.”

—Out-of-school educator in Cumberland County

“Union-wide support of collaborations and time allotted to do well.”

—Classroom educator in Hancock County

“I feel the lacking is more on our side with the time required to begin and sustain these partnerships. As a result, we end up “going it alone” because then we don’t inconvenience someone else with our schedule.”

—Classroom educator in Lincoln County

“Generalized funding to support/offset staff time.”

—School administrator in Penobscot County



Oceanside High School

► FINDING #5

Successful partnerships in Maine occur when educators have the same goals, strong support, and reciprocity.

When asked what makes a partnership successful in CBEL, educators across Maine agreed that the characteristics of successful partnerships included the following elements:

- All parties having an aligned mission and goals for the partnership.
- All partners provide general support and understanding to each other.
- Partnership leans on the strengths of all and is beneficial for all involved.

Respondents stated that successful partnerships in CBEL provided a combination of supports to each other, most commonly:

- Access to materials or resources the other partner lacks.
- Outdoor teaching expertise and skills.
- Ability to help fundraise or provide funding for projects.

★ RECOMMENDATION:

Provide Opportunities to Connect Potential Partners

The CBEL field can work to help individuals identify and connect with potential partners who have aligned missions and goals through networking opportunities, regional gatherings, and resources to foster partnerships.

Voices From The Field: Partnership Success Stories

“Having an outside person like our School Garden Coach takes the pressure off me for implementing all of this on my own. She has also increased the buy-in from other colleagues in my school and district, and it has been very helpful.”

—Classroom educator in Franklin County

“We each bring expertise and things to the project that the other partner lacks. We can work through things together; we have trust, mission alignment, and good communication.”

—Out-of-school educator in Cumberland County

“Their mission and purpose are clear. So is ours. We work together well because we are both dedicated to education and ensuring our children and families have access.”

—Childcare educator in Knox County



ADVANCING THE CBEL FIELD

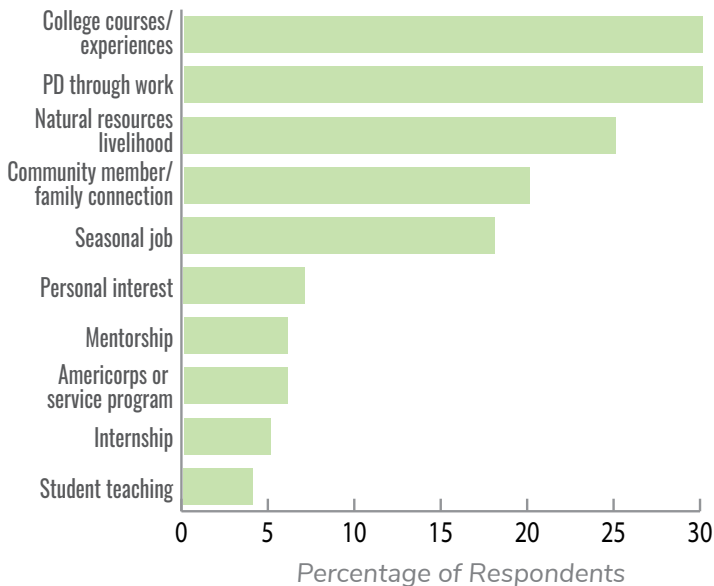
Professional development for educators remains a key way to advance our field and build capacity for high-quality outdoor and environmental learning opportunities for all Maine youth.

FINDING #1

Common pathways into the CBEL field come from higher education, continuing education, and personal experiences.

CBEL educators in Maine get their first exposure to the field through college courses, professional development opportunities through work, and time spent in natural resources livelihoods. They are less likely to have influential pathways through student teaching, internships, or Americorps/service opportunities.

Pathways to CBEL for Educators



FINDING #2

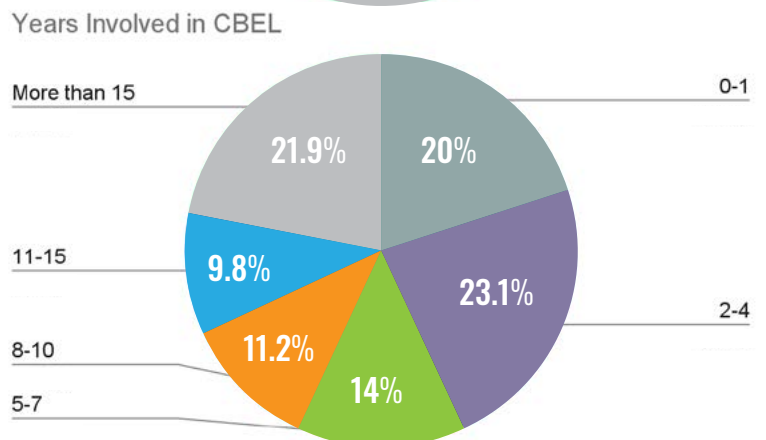
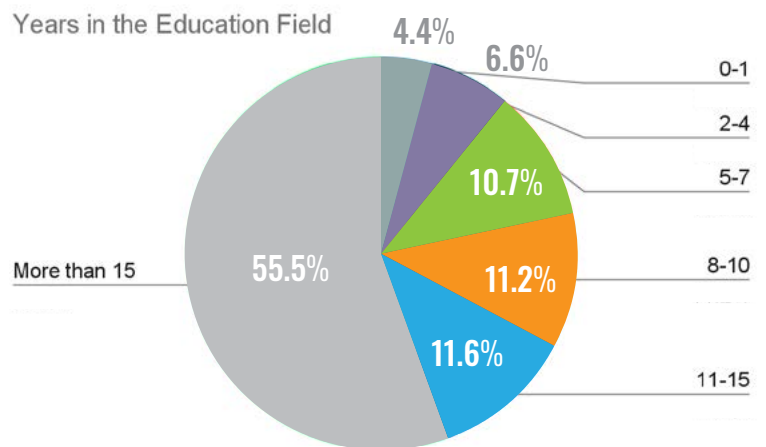
Not all educators start out their careers using CBEL in their instruction.

Only some people start their education career utilizing CBEL at the outset. Many educators use this teaching method after years of experience in education. Over half of the respondents to this survey had more than 15 years of experience in the education field. However, only 22% had more than 15 years of CBEL experience. This demonstrates the importance of offering continuing education opportunities for established educators in addition to early career training. This finding is supported by the second highest pathway to CBEL for educators being PD through work.

RECOMMENDATION:

Invest in Pre-Service and In-Service CBEL Professional Development

Investments in both pre-service and continuing education/professional development opportunities are equally important to ensure that educators receive support no matter when they enter the CBEL field in their educational career.



FINDING #3

Wabanaki history and culture was the top professional development need, and existing resources are underutilized.

Respondents to the survey rated Wabanaki history and culture as the top CBEL professional development need. Other highly-rated professional development needs (those with over 200 responses) included the following content and structural/logistics topics:

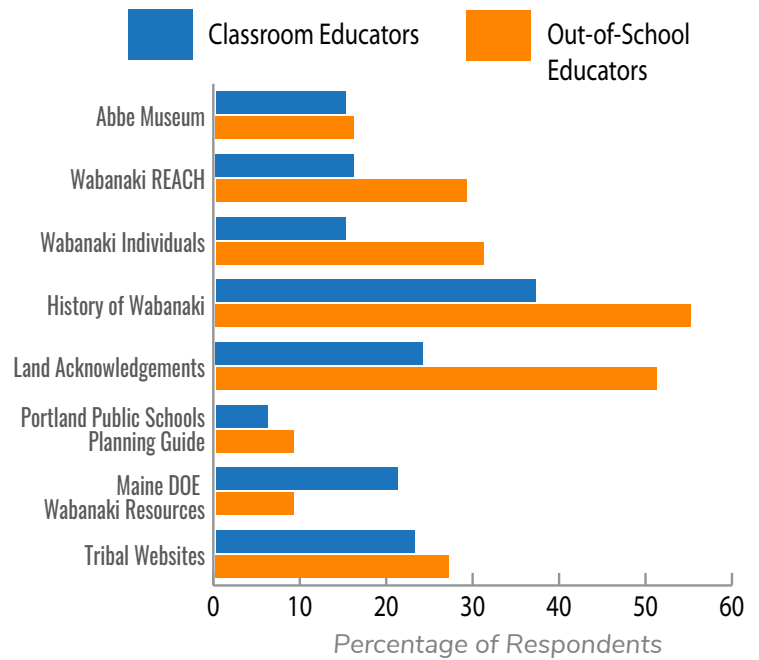
Top Content Needs	Top Structural/Logistical Needs
<ul style="list-style-type: none"> • Wabanaki history/culture • Gardens and local food systems • Climate and sustainability education • Forests and terrestrial ecosystems 	<ul style="list-style-type: none"> • Teaching and learning outdoors, generally • Connecting with community members/scientists/partners • Connection with local issues

Even though Wabanaki history and culture in connection with CBEL was the top-rated need, existing resources and materials were underutilized. Compared to school-based educators, out-of-school educators tend to use these resources more often, especially instructing on the history of the Wabanaki and utilizing land acknowledgments in their instruction. For all other resources and tools, less than 50% of in-school and out-of-school-time educators were using them “sometimes” or “regularly.”

When asked to explain further about their need for support in this area, in addition to describing a need for professional development, educators also mentioned the following:

- General need for more resources.
- Connections with Wabanaki individuals to support instruction.
- Clear guidance and information about how to bring Wabanaki studies in CBEL to students in a culturally appropriate way.
- Age-appropriate lesson examples.

Percentage of respondents reporting they use Wabanaki resources “sometimes” or “regularly”



★ RECOMMENDATION:

Prioritize Time and Funding for Integrating Wabanaki History and Culture into CBEL Programs

Time and funding should be invested to meet the needs that educators are identifying for bringing Wabanaki history and culture into CBEL programming. Investment into sustained professional development over time, leaning into established and well-respected resources, and thoughtfully designing lesson examples and case studies of success in partnership with Wabanaki individuals are all strategies for the field to consider.

Voices From the Field: Supports Needed to Integrate Wabanaki Studies into CBEL

“I would be so interested in attending a conference that teaches me the history and resources available for teaching young children.”

—Classroom educator in York County

“I feel like we are “told” to teach Wabanaki, Indigenous, ancestral knowledge, but we are given very little direction and as an elementary teacher planning every subject, it is hard to dedicate time to develop a curriculum to teach this with the dedication it deserves.”

—Classroom educator in Cumberland County

“Partnering with local Wabanaki to learn of accurate/honorable ways to share the culture/language and heritage of stewarding for the future.”

—Classroom educator in Hancock County

“Trusted resources to improve my own personal knowledge, as well as examples/case studies of CBEL doing this well! Most introductory resources seem to focus on what not to do.”

—Out-of-school educator in Cumberland County

FINDING #4

Barriers to professional development participation mirror general CBEL barriers.

Throughout this report, lack of sufficient time and funding have been consistent barriers to many CBEL initiatives and advancement. The same is true for barriers to professional development participation. Responding educators are enthusiastic about participating in professional development to advance their practice and skills in the field (only 1% of respondents said they weren't interested in participating in any PD topics in CBEL); however, they lack the time and funding to participate. An additional barrier identified by educators was a lack of staff coverage for their classes or programs so they can step away and participate in professional development.



Rangeley Lakes Regional School, Nini Christensen

Voices From The Field: Barriers to Participation in CBEL Professional Development

“Time, always time. There is never enough. Honestly, if someone came in to teach my kids, while I got to learn on the other side, I would be stoked. Taking time off for PD means I have to make sub plans and think more...and again, that is time.”

—Classroom educator in Sagadahoc County

“Professional development is wonderful, but when teachers are stretched so thin, it doesn't go very far. Funds would be better spent getting people into the schools to do this work (organize events, gather resources, develop curriculum and PD, create community partnerships) to create a cultural shift.”

—Classroom educator in Franklin County

“This position is only part-time, meaning I have another part-time job. Trying to plan both jobs, as well as trying to use most of my time here engaging with the public, makes it hard for me to take time to professionally grow my skill set. Online seminars are very helpful, especially those recorded and posted afterwards.”

—Out-of-school educator in Androscoggin County

“Workday hours are very difficult for small businesses like mine. It's difficult to find teacher coverage for staff and myself to leave the classroom for PD.”

—Childcare educator in Franklin County

CONCLUSION

This summary report of the 2022 Census of Community-Based Outdoor and Environmental Learning in Maine is the second in a longitudinal study of the needs, successes, and challenges the field is facing over time. It is critical to track these trends for the field to hold ourselves accountable to progressing towards a future where all Maine youth have equitable access to these experiences that benefit educators, youth, and the future of Maine's ecosystems and natural resources. We are excited by the level of engagement and growth in the field since the first Census in 2019, and we hope that this project will continue to advance the field, create further momentum, and better support educators.

While it is important to be mindful of the challenges and growth areas for our field that this report surfaces, it is equally important to focus on the success stories. As the pictures throughout this report highlight, incredible work is happening across Maine's education sector – from early childhood to pre-K-12 formal education to out-of-school experiences. We want to express our gratitude to all of the educators and administrators across our state who are leading the charge and championing this work for the youth in our communities. It is the work of the innovative, creative, and hardworking educators across our state that will allow us to collectively expand the reach and impact of CBEL programs so that even more young people gain the benefits of academic achievement, increased engagement, better health and wellbeing, development of leadership skills, and for our planet to benefit by having a citizenry that cares and is informed.

Thank you to all the educators working to make Maine's future more just, sustainable, and livable. 🌍



Agnes Gray Elementary School, Beth Clarke



East End Community School, Nicole Evangeline Grace



Lake Region Middle School, Sarah Kearsley



Mt. Ararat High School

Photographs found throughout this report are from the Maine Environmental Education Association's mini-grants program awardees.



**NATURE BASED
EDUCATION
CONSORTIUM**



**maine
environmental
education
association**

For more information, please visit:
teachmeoutside.org