Healthy Kids, Healthy Planet

Outdoor Toolkit

Strategies for Taking K-5 Students Outdoors to Support Mental Well-Being, Environmental Stewardship, and Student Success

Cornell Atkinson Center for Sustainability

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Overview

The goal of this toolkit is to make it easier for schools and educators to take students outside during the school day.

Spending time in nature brings many benefits to students' academic success, social development and mental well-being, and can support positive environmental attitudes now and into the future. Increasing the time students spend in nature during the school day can be a simple and straightforward way to support many different goals educators have for their students.

However, even when educators want to have students spend time outside, making it happen can be challenging. There are many barriers that can limit educators' opportunities to take students out into nature. These can be within and beyond the classroom, individual or structural, and simple or seemingly impossible to overcome. Additionally, the set of barriers that any individual school, class, or educator experiences can (and does!) change by day, by season, or by hour. Thinking about what the challenges might be, knowing that these challenges are common experiences for other educators, and learning about strategies that others have used to successfully overcome different barriers, can all help make it possible to get students outside.

This toolkit provides an overview of the benefits students can experience from spending time in nature, outlines barriers that educators may encounter when trying to take students outside, and describes strategies that could help. Rather than reading straight through, we hope you will start at the point that interests you, and find ideas or strategies that could work with your students.

How to use this toolkit

If you are a teacher:

- Look at the strategies section to **find ideas** that will work in your class (p. 16)
- Look at the barriers section to **identify barriers** you experience, and learn strategies that may help to overcome them (p. 7)
- Use the research evidence about the benefits of time in nature to **build support** among colleagues, parents, students, or administrators (p. 3-5)
- Use the workshop guide to **engage colleagues** in planning for time outside (p. 81)

If you are an administrator:

- Look at the barriers section to **learn about the challenges** your teachers might experience in taking students outside (p. 7)
- Identify **strategies that can help** address barriers in your school (p. 16)
- Use the research evidence to **build support** for spending time in nature (p. 3-5)
- Use the workshop guide to **run professional development** with groups of teachers (p. 81)

What IS nature?

The goal of this toolkit is to help educators build time in nature into the elementary school day. But what does that mean? What is nature, and what do we mean by 'spend time' in it?

"Nature" can mean different things to different people—for some, spending time in nature means getting away from human-made things and spending time in the wilderness. For others, it might mean observing bugs as they work, taking care of a window garden, or watching clouds fly by.

In this toolkit, we view nature as anything humans did not make—greenspace, plants in pots, clouds, animals, bugs, ponds, rocks, or rainstorms. Any of these, or other natural things, can help kids connect to nature -- most outdoor spaces have *some* bit of nature, even if there isn't anything green nearby.

You don't need a lot of space, or any particular kind of space.

Spending time in nature might mean:

- Counting the types of plants (trees, bushes, grass) on the school block
- Finding bugs on the playground
- Watching birds at a window birdfeeder
- Circle time on the lawn
- Counting all the species in a square foot of space
- Following ant trails across pavement
- Observing weather conditions
- Planting flowers or vegetables in garden boxes or pots

We hope this toolkit will help highlight the possibilities that already exist in your space, and make them easier to access.

Why spend time in nature?

Spending time in nature is a simple action that can address two urgent concerns – kids' mental well-being and planetary environmental sustainability – and bring wide-ranging benefits for students and schools. Creating opportunities for time in nature during school can present various challenges, but the benefits are well worth the effort. Copious research has linked spending time in nature to improvements in: 1) social development and academic success, 2) mental well-being, and 3) environmental attitudes. These benefits are summarized here.

Academic and Social Development

Spending time in and near nature can support **academic success**, foster **social development**, and improve **learning** [39,40]. Simply being around nature, or being able to see greenspace outside a window, can improve **cognitive function** and development in children [41]. Short amounts of time in nature can increase **concentration and attention** both while students are outside and when they go back in [42], and improve ADHD symptoms with effects comparable to those of medication [43]. Teaching topics such as science outdoors can **increase interest** in and engagement with those topics, and **improve test scores** on those and other topics [44,45]. Time spent together in nature can foster a **sense of belonging** in a community, and the development of **cooperation skills** and positive **relationships** among students [17]. These outcomes reach across and beyond the curriculum to support many aspects of learning and development. This is important, as it shows that time in nature can address many of the goals schools and educators have for their students.

➔ Including time in nature during the school day can support and enhance students' learning and development.

Time in nature has been found to:

- **Improve grades and test scores** [45,46]
- **Improve attention and concentration, and reduce symptoms for children with ADD/ADHD with effects comparable to ADHD medications** [43,47–51]
- **Improve attitudes toward school** [52,53]
- **Improve behavior in school** [54,55]
- **Improve engagement with topics taught outside, and with indoor lessons after being outside** [42,56,57]
- **Enhance cognitive development** [41,51,58,59]
- **Increase students' sense of belonging** [55]
- **Increase cooperation** [60]
- **Support positive relationship development** [61,62]

Recent Reviews: Ayotte-Beaudet et al., 2017; Becker et al., 2017; Blair, 2009; Gill, 2014; Ray & Jakubec, 2018; Rickinson et al., 2004; Williams & Dixon, 2013

Mental Well-Being

Time in nature has been found to **decrease stress** and **improve mental well-being** [1]. This has been seen across multiple contexts, in various natural settings, over short and long time periods, and during different activities such as walking, sitting, playing, exercising, reading, or even just looking at nature [2]. Even a little bit of contact with nature (10 minutes! Or more is even better) is good for our health. This is important, because youth today are experiencing stress and anxiety at higher rates than young people did in previous decades [3]. This is particularly true in low-income communities, where anxiety and chronic health conditions are seen more frequently, even for kids under 10 [4]. This is, of course, a complex issue, and spending time in nature will not fix the problem. Yet, it can help.

➔ Including time in nature during the school day is a simple way for educators to help decrease stress and improve well-being among students (and adults!).

Time in nature has been found to:

- **Decrease stress and anxiety** [5–8]
- **Increase emotional wellbeing, happiness, and mood** [9–11]
- **Promote resilience to stressful events that can protect mental health in childhood and into adulthood** [7,12–15]
- **Support emotional regulation** [16]
- **Increase self-confidence and self-esteem** [17–20]

Recent Reviews: Maller et al., 2006 [2] and Tillmann et al., 2018[1]

Environmental Stewardship

Spending time engaged with nature as a child can foster a **sense of place**, **belonging**, and **connection to the environment** [21]. Over time, these seeds planted in childhood can develop into positive **attitudes toward the environment** and **stewardship behaviors** that persist into adulthood. This is important, because as the impact of human activity on the planet becomes increasingly clear, it is equally clear that the ways we interact with the environment need to change [22]. While we are developing technological and political ways to address these challenges, we also need to develop a generation of people who can act as advocates for and stewards of the environment. This, also, is a complex challenge. Creating opportunities for kids to spend time engaging with nature, under the guidance of caring mentors, can help.

➔ Including time in nature during the school day is a meaningful action educators can take to support a sustainable future.

Time in nature has been found to:

- **Increase awareness of and connection to nature** [23–25]
- **Enhance positive environmental attitudes and caring about environment** [26–30]
- **Increase stewardship behaviors in childhood and into adulthood** [21,24,27,30–34]
- **Increase agency** [35]
- **Increase sense of place** [36,37]

Recent Reviews: Alcock et al, 2019[38]; Chawla, 2009, 2015

Goals

Ideally, kids and adults would be able to spend at least 10 minutes or more a day in natural settings to support well-being. This may or may not be feasible in different contexts. To move toward this, the purpose of this toolkit is to support teachers and schools in reaching the following goals:

1. **Get all students out in nature for a total of at least 60 min/week during school time, other than recess time**
    a. Why this?
        i. There are different suggestions for the amount of time students (or adults) need to spend in nature to experience the benefits. Studies that looked at the amount of time (the "dose) have found that people experience benefits after as little as 5 minutes at a time in nature [9], and the benefits increase if people spend 2 hours a week in nature [64]. The time students spend in nature during the school day can complement time they spend in nature out of school time, to reach 2 hours a week. This goal focuses on non-recess time, because the free time during recess is an important break for students. Aiming for 60 minutes per week, rather than a specific duration for each activity, gives educators more flexibility in how they might spend that time, and more options for addressing various barriers.
    b. What benefits does this provide?
        i. Wellbeing (stress, happiness, etc.), Academic Success

2. **Have all students intentionally engage with nature at least 1 time/week during school time**
    a. Why this?
        i. Spending time in nature brings many benefits to individuals, and can take many forms. Research suggests, however, that simply being in nature is not enough to foster development of pro-environmental attitudes and stewardship behaviors [39]. Rather, focused engagement, mentorship, and knowledgeable guidance are needed to help students develop environmental attitudes and behaviors. Activities do not need to focus specifically on stewardship to foster stewardship attitudes and behaviors, but research suggests intentional engagement supports stewardship development more than just being around nature [21].
    b. What benefits does this provide?
        i. Wellbeing, Academic Success, and Environmental Stewardship

Barriers to Time in Nature

There are many factors that can make it challenging to take students outside. Barriers can occur and have an impact at different levels—individuals, classes, schools, districts—and can change over the course of a school year or school day. Our research suggests that there is often *something* that makes it hard to take students outside, but the barrier is not uniform or constant across days, classes, teachers, or schools. The barrier(s) that prevents a class from going outside at 10:00 AM on Tuesday might be different than the barrier at 10:30 AM, and different again than 10:00 AM on Wednesday. Chances are that educators will encounter different barriers at different times, and educators in the same school will experience different barriers. Some of these barriers are large and some are seemingly simple, but they can all prevent a class from going outside. They can all, also, be managed or eliminated through preparation, creativity, and collaboration. This section outlines a range of barriers educators may encounter, brief descriptions of those barriers, and suggestions of strategies that might help.

Barriers List

Time
- Scheduling
- Time pressure

Curriculum
- Control over curriculum
- Curriculum connections
- Time/space in standards

Instruction
- Class management
- Distraction
- Educator content knowledge
- Fairness across students/classes
- Out of routine
- Pedagogical content knowledge
- Remembering to include nature
- Services
- Transitions
- Treating time outside as a reward

Administration
- Policies
- Support from authority

Resources
- Educators' time
- Materials and funds
- Transport

Access
- Clothing
- Usefulness of nearby nature
- Getting there
- Harm to environment
- Accessibility considerations
- Sufficient and appropriate spaces
- Sharing spaces
- Schoolyard is public space

Safety
- Behavior/management
- Medical concerns
- Nature concerns
- Physical location
- Student/staff ratios
- Weather

Interest, motivation
- Educator awareness
- Educator interest/ willingness
- Student background experience
- Student interest/ willingness

Social
- Concern about dirt
- Social conflict
- School culture
- Values and beliefs

Barriers descriptions

Time-Related Barriers

Scheduling

The schedule for the elementary school day often includes multiple teachers, activities, locations, or events. It may be determined by someone other than the classroom teacher, and may or may not be flexible. This can limit the time available for taking students outside.

If you experience this barrier, try these strategies: Cross-Class Collaborations; Energy and Emotional Breaks; Field Trips; Flexibility in Scheduling; Free Choice Time; Schedule It In; Shared Experiences; Sign Up for Spaces; Small Group Time; Special Events; Specials; Transit

Time pressure

The school day is only ~6 hours long, and there are a lot of things competing for time.

If you experience this barrier, try these strategies: Bring Nature Indoors; Cross-Class Collaborations; Energy and Emotional Breaks; Field Trips; Free Choice Time; Lunch Outdoors; Outdoor Lessons; Outdoor Topics; Shared Experiences; Special Events; Specials; Stack Outdoor Times; Transit; Transitions

Curriculum-Related Barriers

Control over curriculum

Different schools and districts have different expectations about who makes curricular decisions. At schools where the curriculum is determined by administrators, individual teachers may not be able to add in time in nature. Conversely, at schools where curricular decisions are made by teachers, administrators may have difficulty getting teachers to take students outside.

If you experience this barrier, try these strategies: Energy and Emotional Breaks; Field Trips; Flexibility in Scheduling; Free Choice Time; Outdoor Lessons; Social Emotional Learning; Specials; Transit

Curriculum connections

Different areas of the curriculum lend themselves more naturally to nature connections or time outside than others. This can facilitate or limit the time students spend outside during different units or grades.

If you experience this barrier, try these strategies: Outdoor Free Play; Outdoor Kits; Outdoor Lessons; Outdoor Topics; Social Emotional Learning; Specials

Time/space in standards

Educators are expected to cover many standards and may have trouble fitting time outside in with the required content. Concerns about losing instructional time or efficiency may limit educators' opportunities or willingness to include time outside.

If you experience this barrier, try these strategies: Cross-Class Collaborations; Field Trips; Flexibility in Scheduling; Free Choice Time; Outdoor Lessons; Outdoor Topics; Shared Experiences; Social Emotional Learning; Sign Up for Spaces; Small Group Time; Special Events; Specials; Transit

Instruction-Related Barriers

Class management

Concerns about managing groups of students outside the classroom structure may limit educators' willingness to take students outside.

If you experience this barrier, try these strategies: Class Contract; Develop Outdoor Spaces; Expectations Across Groups; Increase Adults; Outdoor Free Play; Routines; Shared Experiences; Small Group Time; Special Spaces; Transitions

Distraction

Concerns about distractions in the outdoor environment and associated loss of instructional time or increased class management responsibilities may limit educators' willingness to take students outside.

If you experience this barrier, try these strategies: Bring Nature Indoors; Class Contract; Develop Outdoor Spaces; Expectations Across Groups; Routines; Special Spaces

Educator content knowledge

Educators may not have experience with topics related to nature, or may feel they do not have sufficient content knowledge to teach about nature.

If you experience this barrier, try these strategies: Field Trips; Outdoor Kits; Outdoor Lessons; Outdoor Topics (Existing Nature-Related Curricula); Professional Development; Resource List; Use Campaigns

Fairness across students/classes

Feelings of unfairness when one group of students goes outside but others do not may cause challenges. Educators may choose to stay inside unless everyone in a group (grade, class, school) has an opportunity to go out.

If you experience this barrier, try these strategies: Cross-Class Collaborations; Flexibility in Scheduling; Schedule It In; Shared Experiences; Small Group Time

Out of routine

Students who rely on routines may struggle with the disruption during spontaneous or infrequent time outside.

If you experience this barrier, try these strategies: Cross-Class Collaborations; Expectations Across Groups; Field Trips; Flexibility in Scheduling; Free Choice Time; Routines; Schedule It In; Shared Experiences; Social Emotional Learning; Special Events; Special Spaces; Specials; Transition

Pedagogical content knowledge

Educators may not have training or experience in engaging students with nature, or managing groups of students outside. Educators without experience in outdoor teaching may be hesitant to try it, may be concerned about teaching effectively outside, or may not view outdoor spaces as learning spaces.

If you experience this barrier, try these strategies: Outdoor Kits; Outdoor Lessons; Outdoor Topics (Existing Nature-Related Curricula); Professional Development

Remembering to include nature

If time outside is not an established routine or habit, educators may forget to include it in their planning.

If you experience this barrier, try these strategies: Cross-Class Collaborations; Involve Students in Planning; Resource List; Routines; Schedule It In; Sign Up for Spaces; Special Spaces; Use Campaigns

Services

Push in or pull out services may break up the class and limit the opportunities for teachers to take their entire class outside. If individual or groups of students need to be available for instruction or services with other educators, teachers may not be able to take their class to other locations.

If you experience this barrier, try these strategies: Bring Nature Indoors; Flexibility in Scheduling; Outdoor Lessons; Schedule It In; Small Group Time; Specials

Transitions

Transitioning between indoor and outdoor settings can be challenging, particularly related to changing clothing (coats, boots), changing indoor/outdoor energy levels, refocusing on work after being outside, and losing instructional time to transitions. Educators may choose to stay indoors rather than deal with the hassles of transition.

If you experience this barrier, try these strategies: Bring Nature Indoors; Class Contract; Clothing; Field Trips; Lunch Outdoors; Routines; Special Spaces; Stack Outdoor Times; Transit; Transitions

Treating time outside as a reward

If time outside is treated as a reward, then the time may be taken away if students do not 'earn' it.

If you experience this barrier, try these strategies: Class Contract; Schedule It In

Administration Barriers

Policies

Well-meaning policies, particularly related to health and safety, can limit the opportunities for time outside. Example policies include temperature or weather limits for outdoor activities, how close to the end of the day students may be outdoors (often related to the observation protocol for

head injuries), which activities or locations need parent/guardian permission, how frequently or specifically parent/guardian permission is needed, and internal permissions or notifications for teachers to take classes outside.

If you experience this barrier, try these strategies: Build Support; Ease of Access; Flexibility in Scheduling; Schedule It In

Support from authority

Real or perceived lack of support from the higher authority limits options for both teachers and administrators. If administrators (at the school, district, or state level) do not value time in nature or prioritize other goals, it can be difficult for districts, schools, or teachers to get support for taking students outside. This can be true even if a supervisor is, in fact, in favor of time outside. An educator who is unsure of supervisor support, or not aware of a supervisor's commitment to time outside, may be less willing to try new things or ask for help overcoming barriers. This can limit their abilities to take advantage of existing opportunities, create new opportunities, and problem solve to mitigate other barriers.

If you experience this barrier, try these strategies: Build Support; Use Campaigns

Resource Barriers

Educators' time

Educators may need additional planning time to add time outside into their day, or to rework existing indoor lessons. Some outdoor spaces (e.g., gardens, outdoor classrooms) require regular work to maintain usability- this work is often done by teachers who volunteer their time.

If you experience this barrier, try these strategies: Build Support; Professional Development; Resource List; Routines

Materials and funds

Some outdoor activities need specific supplies, or the ability to take regular activities outdoors. This may require outdoor tables and chairs, clipboards for mobile writing, or bags/boxes for transporting class materials outside. There may also be costs associated with site visits, external programs, or buying curricula that are not covered by the school budget.

If you experience this barrier, try these strategies: Build Support; Outdoor Lessons; Resource List; Transit

Transport

If there are no natural spaces, or spaces that could be made natural, nearby, transportation to appropriate outdoor spaces can be a major barrier.

If you experience this barrier, try these strategies: Develop Outdoor Spaces; Ease of Access; Field Trips (Add Nature to Existing Trips);

Access Barriers

Clothing

Appropriate clothing can be a major barrier. Students or staff may not have, or remember to bring, the right gear for cold, rain, or mud, and getting everyone in to (and then out of) the appropriate clothing for the day's weather can take a long time. This may limit time outside to days when the weather is nice.

If you experience this barrier, try these strategies: Bring Nature Indoors; Clothing; Flexibility in Scheduling; Routines; Schedule It In; Transitions

Usefulness of nearby nature

What can be done with the spaces classes can access may not be immediately obvious, especially for educators without a lot of experience in outdoor or nature education.

If you experience this barrier, try these strategies: Develop Outdoor Spaces; Gardens; Outdoor Kits; Professional Development; Resource List; Special Spaces

Getting there

Getting to a natural space can be a barrier if it is distant from the classroom, if exit and entry points to the building are limited, or if classes have to pass by something else (other classes, the playground) on the way. The time or hassle of transit can limit opportunities.

If you experience this barrier, try these strategies: Bring Nature Indoors; Ease of Access; Flexibility in Scheduling; Increase Adults

Harm to environment

As with any natural setting, people walking, digging, playing, or building can harm the plants or animals that live there. Balancing engagement with protection can be challenging, and may limit what classes are able to do in a specific setting.

If you experience this barrier, try these strategies: Class Contract; Develop Outdoor Spaces; Expectations Across Groups; Involve Students in Planning; Special Spaces

Accessibility considerations

Providing accommodations for students with special needs in unstructured and undeveloped natural settings may require more preparation or identifying natural areas that all students can access. Preparing for or managing students' specific medical concerns may limit when or where educators are able to take students-- things like crutches, allergies, or time sensitive medications may require additional planning or health care staff participation in time outside.

If you experience this barrier, try these strategies: Develop Outdoor Spaces; Increase Adults; Schedule It In

School yard is public space

Many school yards are open to the public after school hours, and materials that are outdoors may be moved or taken. This limits how much teachers can set up before a class, and makes it challenging to do activities that require a lot of materials or stretch over several days.

If you experience this barrier, try these strategies: Develop Outdoor Spaces

Sharing spaces

Multiple classes or groups trying to use the same spaces can be a challenge- it reduces availability, limits how much each class can personalize or leave materials in a space, and makes it harder for teachers to plan outdoor time in if the space they want to use might not be available

If you experience this barrier, try these strategies: Cross-Class Collaborations; Flexibility in Scheduling; Schedule It In; Sign Up for Spaces; Special Spaces

Sufficient and appropriate spaces

Having access to natural spaces at all can be a barrier, particularly for schools that do not have natural spaces in the school yard. Additionally, not all spaces are conducive to all activities, and there may be concern about meeting learning objectives when the available settings are not ideal.

If you experience this barrier, try these strategies: Bring Nature Indoors; Develop Outdoor Spaces; Field Trips; Gardens; Resource List; Sign Up for Spaces

Safety Barriers

Behavior/management

Concerns about student interactions or behaviors outside the structured classroom environment, or that students might try to run away from the group.

If you experience this barrier, try these strategies: Class Contract; Develop Outdoor Spaces; Expectations Across Groups; Increase Adults; Involve Students; Routines; Special Spaces

Medical concerns

Concerns about dealing with specific medical conditions while outside-- accessing epi pens, medicines, dealing with bee stings, how quickly the school nurse could get to the students to provide care.

If you experience this barrier, try these strategies: Develop Outdoor Spaces; Ease of Access; Increase Adults; Outdoor Kits

Nature concerns

Concerns about exposure to ticks, insects, sunburn.

If you experience this barrier, try these strategies: Build Support; Routines; Schedule It In

Physical location

Proximity to roads and traffic, concerns about the physical spaces, or hazards near the school yard.

If you experience this barrier, try these strategies: Class Contract; Develop Outdoor Spaces; Increase Adults; Special Spaces

Student/staff ratios

Concerns about managing large numbers of students outside the structured classroom environment, what to do if there is an emergency with only one adult outside, or maintaining

sufficient staff coverage if one student needs to go to the bathroom or nurse. Also concerns about managing groups of students in a way that fosters learning outside the structure of the classroom.

If you experience this barrier, try these strategies: Class Contract; Develop Outdoor Spaces; Expectations Across Groups; Increase Adults; Lunch Outdoors; Routines; Schedule It In; Special Spaces

Weather

Some weather conditions (e.g., thunderstorms) prevent time outside. Very hot or cold weather can make time outside uncomfortable, and can exacerbate certain medical concerns (asthma, frostbite, heat exhaustion).

If you experience this barrier, try these strategies: Bring Nature Indoors; Clothing; Develop Outdoor Spaces; Ease of Access

Interest and Motivation Barriers

Educator awareness

Educators may not be aware of the potential or benefits of spending time in nature, and may not consider including it in the school day.

If you experience this barrier, try these strategies: Build Support; Professional Development; Use Campaigns

Educator interest/willingness

Educators who are not interested in or willing to spend time in natural settings will be less likely to take their classes outdoors. Willingness may be consisted or variable, and can be influenced by things like educators' background experience, personal preference, or bad weather. An educator who would happily take students outside may be less willing to do so in the rain!

If you experience this barrier, try these strategies: Build Support; Professional Development; Use Campaigns

Student background experience

Students previous experiences may influence how they engage with nature. Students who have not had many opportunities to spend time in nature may be afraid or unsure of how to interact with various natural settings, and may need additional time or instruction to feel comfortable enough to engage with class activities.

If you experience this barrier, try these strategies: Expectations Across Groups; Involve Students; Outdoor Free Play; Shared Experiences; Special Spaces

Student interest/willingness

Varying levels of student interest can be a barrier to participation in and effectiveness of time outside.

If you experience this barrier, try these strategies: Involve Students; Outdoor Free Play; Special Spaces

Social Barriers

Concern about dirt

Some bits of nature may come in with the students-- student or family concerns about dirt on clothing, or staff concerns about dirt in the building, may present barriers to engagement.

If you experience this barrier, try these strategies: Build Support; Clothing; Routines; Schedule It In

Social conflict

Students may have more freedom to interact with each other outside of the classroom, and social conflicts between students may come out. This may result in stress for students and increased classroom management for educators.

If you experience this barrier, try these strategies: Class Contract; Expectations Across Groups; Outdoor Free Play; Social Emotional Learning

School culture

School culture has a lot of influence over what happens in schools. Educators at schools where the culture does not support time outdoors may experience more barriers to taking students outside.

If you experience this barrier, try these strategies: Bring Nature Indoors; Build Support; Professional Development; Use Campaigns

Values and beliefs

Students may have values or beliefs related to nature that are not aligned to the way nature is presented in school. Educators may need to help students navigate conflicting beliefs in ways that are respectful and culturally responsive.

If you experience this barrier, try these strategies: Class Contract; Outdoor Free Play; Shared Experiences; Special Spaces

Strategies for Getting Outside

There are many strategies that can help increase the time students spend outside during the school day. Like the barriers, the strategies that make sense will be different for different educators and different schools. We hope teachers and administrators will find strategies that seem easy and obvious — small lifts, small changes to existing practices – that would be easy to try, as well as ideas that are new or involve more extensive change. Some of these strategies are simple steps or small changes that can make taking students outside easier, and some involve more extensive or integrated changes across a school or curriculum. They include ideas about curriculum, instruction, logistics, building support or enthusiasm for time in nature, increasing access to and developing outdoor spaces, and enhancing existing or creating new opportunities. These strategies are primarily things that can be done by or in individual classes or schools, but they may require actions by educators at different levels (class, school, or district). Some strategies can be done by individuals working alone, and some require collaboration among staff or across a school.

Each strategy is linked to multiple barriers that it could help address. We encourage you to start with the strategies that seem like the easiest ways to address the barriers you experience (see the barrier descriptions in the previous section for a list of all the strategies for a specific barrier). This will likely be different for each class and school.

This sections provides details about the what, how, when, who, and why for each strategy. Strategies are listed in categories on this page, and then organized **alphabetically by strategy name** for the descriptions.

Curriculum

- Outdoor Lessons
- Outdoor Topics in the Curriculum
- Social Emotional Learning
- Specials (PE, Music, Art)

Instruction

- Class Contract for Behavior Expectations
- Cross-Class Collaborations
- Energy and Emotional Breaks
- Field Trips
- Free Choice Time
- Involve Students in Planning
- Outdoor Free Play
- Outdoor Kits
- Routines About Time in Nature
- Shared Experiences
- Small Group Time
- Stack Outdoor Times
- Transit- Walk Outside Instead of In
- Transitions

Reminders

- Schedule It In
- Use Campaigns

School-Wide

- Build Support
- Clothing
- Ease of Access
- Expectations Across Groups
- Flexibility in Scheduling
- Increase Adults Available for Outdoor Time
- Lunch Outdoors
- Professional Development
- Resource List
- Sign Up for Spaces
- Special Events

Spaces

- Bring Nature Indoors
- Develop Outdoor Spaces
- Gardens
- Special Spaces

Strategy: Bring Nature Indoors

What: When finding time and space to take children outside is a challenge, consider bringing nature inside the classroom. There are many simple, easy ways to bring nature inside and incorporate nature into existing lessons. Some examples include: observing plant life cycles by growing them indoors; observing animal life cycles by observing tadpoles, butterfly larvae or mealworms inside the classroom; observing structure and function of animals like fish or aquatic frogs; collecting nature objects for sorting (by various properties) or for nature art projects; bring in leaves and sticks to build mini-animal habitats; set-up a nature observation station with natural objects and observation tools (stereoscope, hand lenses, etc). Students can bring in objects they find and add them to the collection.

How: You can collect natural objects yourself and bring them into the classroom or have students help collect objects on the school grounds or during a field trip. Including students in collecting materials can help foster interest in the topic, and is another great outdoor activity. For live animals, order specimens from an online resource like Carolina Biological or get them at a local pet store (ex: mealworms). Set-up a container garden in your classroom on a windowsill, or tape LED grow light strips to the wall to increase light for plants. Incorporate nature into existing lessons, create a designated time to teach about nature and environmental awareness, or include exploring the nature station during free-choice.

When: A nature observation station can be set-up throughout the year and can be available as a center or an option during choice time. Other lessons will involve planning a trip outdoors to collect objects or bringing certain natural materials that you collect into the classroom. Think broadly about all the ways you can bring nature inside. Plants can be grown inside all year (you could have a sprout garden and grow food for your class all year!). Animals grow and change over time so think about what you might want to observe, for how long and when. Nutrition and cooking lessons using harvested veggies from the school garden or from a trip to a local farmers market could happen in the fall.

Who: Teachers can plan for many ways to bring nature inside their classroom. Having a staff meeting to brainstorm ways to bring nature inside during all seasons of the year will inspire teachers and give them many easy ideas to try. Administration can provide financial resources to support purchasing materials like containers for indoor gardening, tanks for animals, science observation tools, and paying for specimens like tadpoles or caterpillars.

Materials: Natural objects (will depend on lesson needs and purpose of lesson), collection bags, science observation tools, tanks for animals, live animals, seeds, soil, etc

Why: Bringing nature inside the classroom removes many of the logistical, class management, and weather-related challenges of taking students outside, and it increases opportunities for students to observe and engage with nature during other activities or short breaks.

Consider: While having plants and animals in the class can be wonderful for students, they also require some management. Plants can tip over, pots or tanks can leak water, and animals occasionally escape. Planning ahead for this can help- put plants and animals on stable surfaces that aren't likely to be bumped as people move around the room and over things that won't be hurt by a little dirt. Consider what sort of maintenance needs to happen regularly (water plants, feed animals, clean cages, etc.) and who will care for plants and animals over the weekend or during school breaks. Get students involved in caring for your classroom nature—assign regular maintenance jobs to students, ask for volunteers to 'host' class pets over breaks, and get everyone involved in cleaning up the classroom after a project with natural materials.

Relevant Resources:

- *Kids Gardening Container Gardening:* Online guide explaining how to create a school garden and introducing concepts of container gardening.

Barriers addressed: Clothing; Distraction; Getting There; School Culture; Services; Sufficient and Appropriate Spaces; Time pressure; Transitions; Weather

Strategy: Build Support

What: Build support and enthusiasm for taking students outside among others connected to education.

How:
Among administrators: To build school or district administrative support for taking students outside, consider how time outdoors can support the goals of the school. The beginning of this toolkit (p. 3-5) outlines some of the extensive research on the benefits spending time outside can bring to students (and adults!). Ask for a meeting with the administrator or decision-maker and show them this toolkit, or pick out the research addressing school-specific goals, contexts, or concerns.

Among teachers and staff: To build support among teachers and staff, try these things:

- Request or provide professional development related to taking students outside. See Professional Development p. 61 and the Workshop Guide p. 81 for ideas on what to cover and how to run professional development activities focused on taking students outside.
- Start an outdoor educator group. Gather a few teachers in your school who are already interested in taking students outside, and work together to plan activities. Co-planning can help with generating ideas, motivation, problem-solving, reminders, and interest. Seeing how other teachers in a school find ways to take students outside can help encourage other educators to try taking students out too.
- Run an outdoor campaign in your school. Have a competition to see which class can get outside the most over a specific month. See Use Campaign p. 80 for details.

Among students: Students are often eager to go outside, but they may see outside time as a break rather than as learning time. To build support for focus and attention during outdoor activities, talk to students about why you want to do activities outside, what will be expected of them while they are outside, and what the consequences might be for not meeting those expectations. Having a clear purpose for an outdoor activity (e.g., gather 10 leaves, read in your sit-spot for 20 minutes, run around the building 3 times), and why they will do that activity (e.g., to compare leaf shapes for science, to have a calm quiet spot for reading, to refocus energy after a challenging lesson) can help students think of time outdoors as intentional learning time. See Class Contract p. 22, Involve Students in Planning p. 46, or Routines p. 64 for ideas.

Students may also be hesitant or unwilling to go outside. They may feel this way for a variety of reasons, such as concerns about getting their clothes dirty, dislike of unpleasant weather, concerns about not having or needing to borrow winter clothes, lack of experience in natural settings, concerns about bugs, or concerns about social interactions in a less-structured setting. Talk to individual students about why they don't want to go outside, and what might help them feel more comfortable or willing. See Clothing p. 24 (and specifically, the section on class sets) for ideas on weather-appropriate clothing, Outdoor Free Play p. 50 for ideas on helping students feel comfortable in natural areas, and Class Contract p. 22 or Social Emotional Learning p. 71 for ideas on navigating social interactions.

Among families: Build support among students' families by sharing your plans and motivations for taking students outside. Tell families at the beginning of the year, beginning of the week, or whenever you know your plans, that you will be taking students outdoors. Share the reasons you want to do this—the learning it will support and benefits you expect students to experience. Send reminders about what sorts of clothing students might need on particular days, when they might get dirty, or when they might need extras to help address barriers related to clothing or dirt. Engage families in thinking about spending time outdoors. Have students ask their families about their favorite places to go or things to do outside, or collect data from adults in their families about things they did outside when they were the students' age. If there is a time when families come to the school (conferences, curriculum night) take families outdoors so

they can see the places their kids will be learning and tell them about the activities you plan to do with students. Have students write about or draw pictures of outdoor activities and spaces, and send their finished work home to share with their families.

Among the school's community or neighbors: Involve the community in planning for any large schoolyard changes. Invite community members to give input to generate ideas and enthusiasm for the project. Consider multi-use spaces and how schoolyard projects can support other community groups or activities. If you want to build a nature trail, can it also be used for jogging? If you create outdoor seating areas for classes, can families use them on the weekend? If there are near-neighbors—people whose homes or businesses are close to school grounds—consider any impact schoolyard activities might have on them, let them know of long-term plans or repeated activities, and ask them for ideas or input on activities in outdoor neighborhood spaces.

For yourself: If you are interested in getting students outside but find it's hard to make it happen, consider finding another educator in your school or district to partner with. An outdoor partner can help in many ways- they can share ideas, remind you to plan for outdoor time, strategize ways to increase support from others or overcome barriers, collaborate on developing spaces or plans, and provide motivation and accountability.

- If you are at the same school as your partner, try these things:
    - Plan times for your classes to work together outside (promotes community among students, provides accountability, increases the number of adults outdoors)
    - Work with another class to develop or take care of an outdoor space (at the same or different times—promotes community among students, divides the work of planning and caring for a space among more people). Have students write letters to the other class about the plans and activities to practice writing and communication skills.
- If you are at different schools (or at the same school!), try these things:
    - Brainstorm ideas and collaborate on planning ways to take students outside. Share activities or tips, work together to problem-solve, and hold each other accountable for implementing plans.
    - Practice literacy and communication skills by setting up outdoor pen pals between schools, and have students write about, draw, or map their schoolyard and outdoor activities to share with the other class.
- If you are an administrator:
    - Find someone in a similar position in another school or district to brainstorm ideas, share successes and failures, strategize ways to build interest or support teachers, and problem-solve barriers.

When: Anytime

Who: Anyone interested in building support for taking students outside

Materials: Varies

Why: Increasing support at all levels- administration, teachers, school staff, parents, and kids- can help reduce and overcome barriers to taking students outside, and can increase opportunities and impact.

Relevant Resources:

- ***North American Association for Environmental Education eePRO*:** The online platform for environmental education professional development and resources.

- *Reddit: Outdoor Education, the original playstation*: Teachers and administrators can connect and discuss with others interested in outdoor education online through this forum to get new ideas, advice, etc.

Barriers addressed: Concerns About Dirt; Educator Awareness; Educator Interest/Willingness; Educators' Time; Materials and Funds; Nature Concerns; Policies; School Culture; Support from Authority

Strategy: Class Contract/Setting Behavior Expectations

What: Many teachers set-up class contracts with students specifically around behavior at the beginning of the year. Consider developing a class contract with your students around time outside and behavior/expectations for outside time. The conversations that will occur in making the contract can provide excellent opportunities to discuss the benefits of outside time with students as well as get into the nuts and bolts of the what-and-how of students' behaviors outside. The contract could include class goals around weekly time outside (either minutes or sessions a week). In addition, class contracts can be referred to throughout the year to re-teach expectations and could be revised to include increased outside time goals.

How: The following steps could be taken to develop a class contract for outside time with students:

1. Share the research about the benefits of time outside with students. Ask them to share how being outside may have benefited them in the past.
2. Decide a goal for outside time--number of minutes, times a week. Perhaps your class starts with 30 minutes/one day a week or 1 session a week (time could vary depending on week). As the year progresses and students get more efficient with transitions and more comfortable working outside, you could revisit the contract and increase the outside time goal.
3. Discuss Outside Safety--what are some issues around safety that could come up? (staying with group, dealing with weather, off task behavior, dealing with outside distractions, nurse/bathroom/water, crossing streets, listening to directions) How can we address these concerns?
4. Have students come up with statements that say what they will DO (not what they won't do) while outside. Have them discuss why each statement is important to making outdoor time effective and safe.
5. Have all students sign the contract. You could even make copies for families and have them discuss with their children and sign together.

Revisit the contract before going outside each time. After returning indoors, have students reflect on their behavior. Did they stick to the contract agreements and if not, what they could improve on the next time. Revisit the contract to change time goal or add expectations as needed throughout the year.

Example Class Contract

Class 303's Outdoor Learning Contract
Our Goal: We will spend 1 class period a week outside
Our Expectations:

- We will be safe with our bodies (walk, be aware, hands to ourselves)
- We will use respectful language (kind words and tone only)
- We will listen to adults the first time
- We will work together
- We will say on task during work-time
- We will transition quickly

Signed By:

When: Take the time in the beginning of the year to develop a class contract with students. Involving them directly in the creation of the contract rather than presenting them with a contract and telling them they need to agree will ensure buy-in and get students committed to the goals and expectations. Revisit the contract before and after outdoor time outside and throughout the year as needed.

Who: Teachers can develop a class contract with their students. Schools could also develop a school-wide contract that has a time goal for each class and some general expectations that all classes should adhere to (while this would be great to create clear school-wide expectations, creating a contract with students directly is most effective for individual student buy-in).

Materials: Chart paper, markers, ability to make copies

Why: Getting students excited about and committed to an outside time goal will help motivate them to make good choices while outside. Having collaboratively created expectations for behavior and work-time that are the same for every trip outdoors make expectations very clear for students and give them a chance to reflect and improve as the year progresses. Clear expectations make outside time manageable and improves student behavior, which in turn makes taking students outside less stressful, easier, and more likely to happen.

Barriers addressed: Behavior/management; Class Management; Social Conflict; Distraction; Harm to Environment; Physical Location; Student/staff ratios; Transitions; Treating Time Outside as a Reward; Values and Beliefs

Strategy: Clothing

What: Strategies for managing clothing can make time outside easier, more comfortable, and less messy for everyone.

How: There are several challenges related to clothing that can impact opportunities to take students outside. Students may not have weather-appropriate outdoor clothing, may not have the right gear on the day you want to go outside, or may get wet/dirty during outdoor activities. Different strategies can help address these concerns.

Weather-appropriate clothing: Make sure both students and staff have appropriate clothing for different weather conditions. Include rain (raincoat or poncho, splash suit, rain boots) and winter gear (coat, boots, hat, gloves, scarves, snow pants) on the list of school supplies at the beginning of the year. Remind students to bring their weather gear the day before you plan to go outside, so everyone is prepared for outdoor activities. Ask students to bring an 'extra' set of clothing to store in their cubbies in case they get wet. This is a common practice at many pre-schools, and could be continued through the elementary grades. School administrators, nurses, or PTA can help make sure all students and staff have the gear they need through clothing drives, clothing banks, or purchases. Remember that staff also need appropriate clothing to take students outside in all types of weather!

Clothing bank: Set up a clothing 'bank' in your school where students can get items of clothing if they need them. In some schools this is maintained by the school nurse, main office, or other administrator, where students can drop in when they need a piece of clothing. Students can borrow or keep the clothing, depending on the item and situation. Many schools run a winter clothing drive to provide cold-weather gear (coats, boots, hats, gloves, scarves) for students who may not have their own. Clothing banks can be stocked through donations or clothing drives. If possible, have an individual or small group take responsibility for keeping it stocked and organized.

If you set up a clothing bank at your school, consider how to structure it to meet needs respectfully, and not 'out' students who may not have clothes. Kids are perceptive, and wearing borrowed clothing can be uncomfortable or stigmatizing for students. Work with school staff to set up discreet ways of checking which students may need winter gear, connecting students with clothing, and returning borrowed clothing when it is no longer needed.

Class or school set: Keep a set of rain ponchos or shoe covers to use when it is wet out. Clear plastic ponchos are inexpensive and don't take a lot of storage space between uses. With large sizes or tent-style ponchos, kids can keep their arms and a notebook inside the poncho and use it as a see-through writing tent for outdoor writing. Ponchos can also be used as tarps so students can sit on wet ground. Share a set of weather-gear with your grade-level, or have school sets that teachers can borrow from the nurse or main office. This can help make sure all students stay dry even if they don't have their own rain gear, and can stop a wet day from keeping classes inside. Having items for everyone in the class can also reduce stigma around borrowing gear and support equal access to time outdoors.

"Closet" or wet gear storage space: Outdoor gear can quickly fill students' cubbies, and can become wet and messy after playing in the rain or snow. Try setting up a 'wet gear' area near the classroom door, in the hallway (if allowed) or near the school entrance. This could include hooks for wet clothing and plastic mats for wet boots, and would help contain the water and keep the rest of the classroom dry. If there isn't space for this in each classroom, administrators can help by setting up spots for each grade to use near the entrance. Collapsible clothing racks could be set up temporarily when they are needed, and stored when they are not.

Washer/dryer: While this may not be possible in every school, having a washer and dryer at the school expands the options for clothing banks or class gear sets. Being able to easily wash items would allow schools to have sets of hats, coats, or gloves for classes to use, and would make it easier for borrowed clothing to be quickly returned to the clothing bank, without worrying about sharing dirty clothing among students.

When: Anytime, but especially during winter months.

Who: Administrators, teachers, school nurse, other staff, PTA

Materials: Weather-appropriate clothing, coat racks and shoe mats, space for storage

Why: Making sure everyone has appropriate gear, and having systems to manage the gear, can make it possible for everyone to go outside comfortably in all types of weather.

Consider: If getting kids in/out of winter clothing is also a barrier, consider building Routines (p 64) or practicing Transitions (p. 78) related to putting on and putting away winter clothes.

Barriers Addressed: Clothing; Concerns About Dirt; Transitions; Weather

Strategy: Cross-Class Collaborations

What: Cross-class collaborations such as buddy reading and whole-grade events provide easy opportunities to take children outdoors.

How: For example, if two classes typically do buddy reading, take the kids outside to read. If kindergarten does Fun Fridays where they play games in the gym, take them outside to play the games instead. If the 3rd grade classes are bringing a guest speaker, consider having the speaker talk to students while gathered outdoors. If 1st grade is testing airplane creations for their flight project, rather than testing in the hallway, test outdoors.

Things to consider when planning:

- Coordinate with other teachers about where to meet outside
- Ensure the outdoor space will be available (sign-up sheet in main office, school outdoor space Google Doc, if your school has such)
- Have a rain plan (a space indoors to use if weather is bad)
- Have children bring needed materials outside (for example, bring books with them to read)

When: Many cross-class collaborations are regular, scheduled events like buddy reading that occur at a set time each week or bi-weekly. Keep the regular schedule but plan to do the gathering outside instead of in. If a grade typically gathers once a month to do an activity together, plan to do it at the same time outside.

Who: Teachers can coordinate with other teachers within or across grades. Administration can provide support by encouraging teachers to utilize cross-class collaboration time to go outside. They can create a Google Doc with outdoor spaces for teachers to sign-up to use. Librarians could plan cross-class reading/special events outdoors instead of inside.

Materials: The same materials you would need for the indoor event.

Why: Cross-class collaborations provide an excellent opportunity to take children outside as classes are often already transitioning out of their classroom. With the movement already planned for, no extra transition time will be needed to get outside. These are also scheduled times that are out of the regular academic schedule and can be an easy time to go outside without taking away from required subjects.

Consider: Consider thinking more broadly about a cross-class collaboration like buddy reading. You could make a buddy-learning collaboration between two classes. Sometimes the classes could read outside, but they could also do nature exploration together; they could do bud drawings/observations at different points throughout the year; they could learn new games together; they could share what they've been learning about in their own classes; they could even go outside for some snow play. Think beyond buddy reading and how you could utilize the changing of the seasons and the outdoor spaces at your school as opportunities to engage kids in outdoor exploration and learning.

Barriers addressed: Fairness Across Students/Classes; Out of Routine; Remembering to Include Nature; Scheduling; Sharing Spaces; Time Pressure; Time/Space in Standards

Strategy: Develop Outdoor Spaces

What: Think creatively about the outdoor spaces that exist in and around schools grounds. By brainstorming and reimagining existing spaces, a side yard could become an outdoor classroom; a woodsy area could become a nature exploration area with a student-designed trail; milk crates on a black top could become an outdoor meeting area. The possibilities are endless once you think out of the box. In addition, your students, staff or administration could work on designing, planning and building a special outdoor space. Classes could also take responsibility for maintaining and utilizing certain spaces around the school grounds.

How: The first step is to identify the outdoor spaces that already exist. Next, brainstorm all of the ways that these spaces could be used. Then, determine if there are any materials or simple building projects that could increase the ways a space could be used (ex: adding picnic tables, shade sail or crates). The last step is to undergo a design and building project to improve existing or create new outdoor learning spaces. The following chart provides questions as well as ideas to guide the process.

Step	Guiding questions	Examples
Identifying Existing Outdoor Spaces	• What outdoor spaces already exist in and around the school grounds? • Have students, staff and admin walk the grounds listing the spaces they see. Compare the lists--did students see different spaces than the adults?	<u>Examples of school spaces:</u> • Playground • Side yard • School garden • Field next to school • Woodsy area adjacent to school field (sometimes on the property or next door. If next door, find out about ownership and if students can use) • Base of a big tree • Front of school (sometimes there are grassy areas or gardens at school entrances) • Black top/basketball court • Nearby parks (short walking distance) • Area outside of cafeteria exit
Brainstorm Ways Existing Spaces Could be Used	• How can existing spaces be used? • How can the use and function of a space change through the seasons? • How many classes could be outside at once in different spaces and not be in each other's way?	<u>Examples of space use:</u> • A black top can be a meeting area • The base of a tree can be a place to do a read aloud • A side garden can provide quiet writing spots • The entrance to the school might be a shady spot where a class can gather or a small group can work

		• The school garden can be a place to inspire writing, make observations of wildlife, get into gardening and the science of growing food, an inspiration for cooking lessons, and much, much more • A field can be used for large games to be played or for a whole grade gathering • A nearby woody area can provide nature "sit spots" and a nature trail • The playground can be a place for free play but also for investigating science topics like force and motion
Adding Materials to a Space to Increase Use/Function	• What materials could be added to existing spaces to increase the ways they could be used? • Can materials make a space easier to use in wet or cold weather? • Would a boundary or barrier make a space safer or easier to use?	<u>Examples of how added materials improve space use/function:</u> • Have a tarp available to take outside on a rainy day (place on grass in a field, place at the base of a tree, place on the black top) • Milk crates can create instant stools for an outdoor meeting area • Basic picnic tables outside the cafeteria can create an outdoor eating area • A shade sail or tarp can create shade in a sunny spot • Signs or activity cards for a nature trail can engage kids • Tree stumps can create outdoor seats (What does the city do with cut down trees? Can they provide stumps to the school?) • Adding a boundary fence can make management easier and reduce safety concerns about students running off or proximity to

		traffic. A boundary could be around a small part of the school yard, or just along a trouble spot like a busy road. Natural boundaries- hedges, rose bushes, garden strips- can be just as effective as human-made ones.
Outdoor Space Design/Construction	• Is there an outdoor space on the school grounds that can be improved through a design/building project? • How can the design improve the use and function of a space?	<u>Examples of design projects:</u> • Design and build an outdoor amphitheater or stage with a wooden stage and wooden benches. This can be used as a teaching and performance space. • Survey the woodsy area of a school and locate an area to clear to create an outdoor classroom. The classroom could have basic wooden tables for students to work on. • A gazebo or pergola built in a side yard or field can create a separate learning space. Vines and wisteria make a natural roof that can provide shade or a constructed roof can provide shelter from rain.
Different Class/Grades Can Take Care of Certain Spaces	• How many outdoor spaces are on the school grounds? • What type of maintenance do these spaces need? • Can classes take responsibility for maintaining certain spaces? They can do maintenance and spend a lot of time in the area to create some ownership for children. • Can classes be responsible for managing sign-up/reservation process for a certain school space?	<u>Examples of outdoor space maintenance:</u> • A class could be responsible for raking leaves, shoveling snow, planting bulbs or wildflowers, checking on seats and added materials. • A class could have a tarp or set of materials that make a certain space more useful and be responsible for lending the tarp/materials to different classes. • A class could check on an outdoor classroom in the woods and make sure it is in good shape--no rotting

		wood, no animal damage, cleared, no poison ivy, etc. • A class could be responsible for managing the sign-up process to reserve/use certain spaces.

When: Teachers and students can walk the school grounds at the beginning of the year to identify existing spaces and brainstorm ways to use them. Administration and staff can collaborate on what/how to get materials to improve and expand space use. An ongoing project with students or staff to design an outdoor learning area can happen at any time. Classes can take on maintenance of a space or managing the sign-up/reservation process of a space throughout the year. Using outdoors spaces during the colder/wetter months will take some dedication, brainstorming, encouragement and planning but it can be done! Kids love to be outside in the snow and they care less about the temperature and more about the engaging activity they will be involved in.

Who: Teachers can take the initiative to identify and reimagine existing spaces on the school grounds themselves or they can involve their students in the process. Administration can support this process by having staff walk around the school grounds in groups during a staff meeting, list available spaces, and brainstorm ways they could be used. Involving teachers and students in each step of the process increases investment. Teachers could choose to use these spaces at any point during the year depending on what lesson or purpose they have planned. Administration can prioritize or encourage teachers to utilize spaces, especially by providing a space for staff to reflect and share ideas, have time to build and improve spaces and by providing space in the daily schedule that encourages teachers to take students outside.

Materials: Time to brainstorm and identify spaces; basic materials to improve spaces such as crates, tarps, picnic tables, signs; sign-up process for reserving and using spaces such as clipboards outside a classroom or a Google doc.

Why: Engaging in a process where teachers and students identify outdoor spaces and their potential uses will greatly increase investment and ideas for how to get students outside. Each year, a school can improve outdoor spaces by adding new materials or going through the design and building process. If students participate in the process of identifying and utilizing outdoor spaces throughout their school career, they will see the outdoors as learning space just like the classroom. Helping teachers see the potential ways to use their school grounds for outdoor learning makes it much easier for teachers to plan and choose to take students outdoors.

Relevant Resources:

- *North American Association for Environmental Education How to Start an Outdoor Classroom at Any School:* Recorded webinar from Vermont schoolteachers.
- *Project Learning Tree Educator Tips on Creating an Outdoor Classroom:* Educator tips on things to consider when creating outdoor classrooms.
- *School Outdoor Learning:* Example images that showcase unique and creative ways to develop outdoor classrooms with small budget.
- *Virtual Lab School: The Outdoor Environment: Designing for Learning:* A virtual lesson on designing an outdoor environment for schools.

Barriers addressed: Behavior/management; Class Management; Distraction; Usefulness of nearby nature; Harm to Environment; Medical Concerns; Accessibility Considerations; Physical Location;

School Yard is Public Space; Student/Staff Ratios; Sufficient and Appropriate Spaces; Transport; Weather

Strategy: Ease of Access

What: Getting to natural spaces can be a major barrier, but the challenges are not all about proximity or location. Thinking about what it takes for classes to access spaces or equipment, and the policies that govern access, can help remove barriers and make access easier.

How: Consider what teachers need to do to get from their classroom to natural areas, what they need to do to get equipment to use outside, and the policies or guidelines that control those actions or processes.

Increase access to outdoor spaces:

- If there is not a lot of green or outdoor space on the school grounds, consider enhancing existing spaces or finding alternatives. Look for underused spots on the school ground that could be enhanced to provide more opportunities. Add garden boxes to blacktop, create mini-parks in parking spots, or line the sidewalk or building with plants. See Develop Outdoor Spaces p. 27 for ideas. Look for a park or other green space near the school that students could walk to. See if it is possible in your district to have parents sign one permission form for repeated access to a specific nearby space rather than needing to get individual permission forms each time. If it is too far to go to all the time, make a plan to go once a week or every other week. If the nearby space is not ideal for learning, consider having students help plan ways to develop the space to make a park for the community. This can be a great focus for planning, communicating, and writing, and can be a meaningful way for students to engage with and contribute to their school neighborhood.
- If there are areas of the school yard that need to be fenced in and locked (a garden, a pond, etc.), consider having a key for each teacher/staff, or several keys in the main office that teachers can check out, or using a lock with a keypad instead of a physical key. Consider whether the lock is really necessary (for example, for students' safety, or to keep deer out of the garden) or whether it could be replaced with a latch that would maintain the perimeter but increase access.
- Many schools have multiple doors, but safety-focused policies that limit when and how they can be used. If the school policy is that everyone must enter and exit through the main doors, it can mean that classes have to travel farther to get outside. If there are doors closer to outdoor spaces, discuss with staff/administration whether there is any flexibility in the policy that could increase access – could teachers have keys to exterior classroom doors? Could someone on the inside open a door to let a class back in? Could the class leave through a back door even if they need to return through the main door? Increasing direct access can reduce transition times and make it easier to get students outside.
- Consider the path each class takes to get from their classroom to outdoor spaces. If there are distractions or obstacles on the way (for example, walking past the cafeteria when other students are at lunch, or past the gym while other classes are playing exciting games), this can reduce students' focus and increase the time it takes to transition outside. Consider whether there is another path through the school that could avoid the obstacle, or practice dealing with the obstacle as part of the class Routine (p. 64).

Increasing access to equipment:

- What do teachers need to do to get outdoor equipment? Are chairs/tables/playground equipment/pop-tents/etc. stored outdoors or do teachers need to bring them out each time they want to use them? Do teachers have independent access to equipment closets or sheds, or do they need to find the person with the key each time? If equipment needs to be locked up, consider giving each teacher a key or using a keypad lock to increase access. Have several smaller sheds/boxes for equipment spread around the schoolyard so classes can easily get equipment in several locations instead of carrying everything to and from a single large shed.

Policies to support access:

- What do teachers need to do before they take a class outside? Do they need to sign out or alert the main office? Allowing remote sign-out options instead of in-person can remove a step from the transition process and give teachers more options. Consider having teachers call the office, or a digital sign out form, or a paper sign out form at each of the available exits.
- What do teachers need to take when they go outside? Are they required to take a first aid kit or walkie-talkie? Reducing the amount of materials teachers must take for activities in the schoolyard, and having pre-packaged kits available to pick up at each exit or for each room, can help reduce the time and planning that is required to take students outside.
- Many schools have safety-focused policies about when students can or cannot go outside. For example, schools may decide that students can't go outside when the temperature is below a cut-off, or not at the end of the day so a concussion observation protocol can be finished before busses leave if a student falls. These policies are important for student safety, but consider whether policies are simple cut-offs or can vary for different activities. During cold weather, perhaps students can go outside for a physically active team-building activity but not for activities where they sit still for an extended time. At the end of the day, perhaps students are not allowed to do activities with a higher risk of falls/concussions than typical indoor activities, but could go outside for independent reading in a sit-spot. Discuss with staff/administrators to find a reasonable balance between safety and opportunity.

When: Anytime

Who: Teachers, staff, administrators

Materials: Keys, sign-out options

Why: Even small barriers to access can prevent classes from going outside, especially when combined with other barriers. Making it easier for teachers to access outdoor spaces and equipment can help increase the time students spend outdoors.

Barriers Addressed: Develop Outdoor Spaces; Getting There; Medical Concerns; Policies; Transport; Weather

Strategy: Energy and Emotional Break

What: Breaks outdoors can serve an important role in helping students release or gain energy as well as helping relieve stress after intense work periods. If a class is very lethargic or unmotivated during the morning or during a certain subject, add in a 10-minute walk around the building to get fresh air and invigorate students or take students outside for a guided energy break. If students have completed a taxing academic task or a long assessment, allow them to relieve some stress by taking them outside for an emotional break involving a guided mediation or movement exercise.

Guiding these breaks will make them more effective for students. Letting children run around freely might seem like a great way to relieve stress or extra energy but can often discombobulate students, make them less focused and create opportunities for conflict. Guiding students through meditation, centering and breathing exercises, or guided movement exercises will help students release, relax and center their bodies more effectively. Holding circle time outdoors and reading nature stories or poems, or singing nature songs, can also help students relax and focus some attention on the calming effects of nature.

How: Deliberate planning is essential to making these breaks effective. See below for some considerations.

Energy Breaks	**Emotional Breaks**
Do my students need to relieve energy? ➢ If so, incorporate guided relaxation and mindfulness activities Do my students need to get energized? ➢ If so, incorporate guided movement activities	Do my students need to relieve stress? ➢ If so, incorporate some guided movements such as simple yoga moves, yoga breathing and mindfulness Do my students need to let go after a period of extreme focus? ➢ If so, allow for some running or free body movements. Do 5-4-3-2-1 with exercise moves like burpees, high knees, jumping jacks etc. or choose a guided movement activity to lead students through
How much time do I have? ➢ If you only have a few minutes, walk to the nearest exit and do movement or meditation in that location. ➢ If you have a longer amount of time consider walking or running to different locations on the school grounds then meeting for some guided movement or relaxation.	

When: Plan to do an outdoor energy break when students are in a slump, are unmotivated or are overly energized and unfocused. Incorporate an outdoor emotional break after intense periods of focused work or after stressful assessments. Another idea is to guide students through a 2-3 minute guided mediation outside just after lunch/recess every day. This is not only an easy way to add outdoor minutes, since students are already dressed (or have their gear) and are near an exit to the outdoors, but it also prepares students bodies for a calmer, more focused afternoon.

Who: Any teacher, classroom/specials/academic specialists and teacher aids can utilize these energy and emotional breaks to help students get their bodies into the best place for learning. Administration can support this by providing teachers with resources and ideas (there are many resource guides for meditation, mindfulness and active movement with kids). Administration can teach some easy guided meditations at school assemblies and meetings giving teachers and students practice.

Materials: No materials are needed but a guided mediation script or guided movement activity can be helpful to making these breaks effective.

Why: A deliberately planned, effective outdoor energy or emotional break can work wonders. These breaks can bring a class back to focus or help students relieve stress. Doing these breaks outdoors make them much more effective than indoors as breathing fresh air, feeling the wind blow on cheeks and feeling the elements are centering and focusing for students. These breaks take very little time, create students who are more ready for academic work, and also increase minutes outdoors.

Consider: Share movement and mindfulness ideas with colleagues. Create a Google Doc or school Google Classroom page to share ideas.

Relevant Resources:

- Go Noodle has a lot of excellent guided mindfulness activities. While these are presented on a screen in the classroom, they can give teachers ideas of how to lead mindfulness or relaxation exercises on their own.
- Guided mediation scripts for children
    - Green Child Magazine
    - Kindred Meditations
- Movement activities for children
    - Action for Healthy Kids
- Great resource list with lots of movement activities for kids:
    - West Virginia Department of Education Resource Guide
- There are many free meditation and movement resources/ideas online, just a few clicks away. You could even look one up on your phone and read it from there, no printing required.

Barriers addressed: Control over curriculum; Scheduling; Time Pressure

Strategy: Expectations Across Groups

What: Set consistent expectations across the school for how spaces can be used, what students can and can't do in certain spaces, and how they are expected to behave during various outdoor activities.

How: As a school community, discuss and agree on what can or cannot be done in certain spaces, during certain activities, or at certain times. Think about the different types of activities that might occur on different parts of the school yard, with different groups, or at different times. For example, perhaps students are allowed to run on the lawn during recess, but never during outdoor class time, and not allowed to run in the woods at any time. Perhaps students are required to stay within a certain boundary by everyone who takes them outside during school hours, but can go farther as part of an afterschool program. Perhaps building forts out of sticks is acceptable during an engineering design activity, but not during any other outdoor activity. The expectations do not need to be uniform (e.g., no running ever), but having clear expectations for what is allowed, at what times, in what spaces, with which teachers or groups, can help students know what they are allowed or expected to do.

When: Anytime. Setting up expectations at the beginning of the school year can be especially effective.

Who: Everyone who uses school spaces.

Materials: No required materials. Posters or signs outlining expectations in different locations could be helpful.

Why: Having clear and consistent expectations can help students know what they can do at what times, in what locations, and during what activities. This can reduce the time and energy that teachers spend managing students' behavior, and make time outside easier and more effective for everyone.

Barriers addressed: Class Management; Behavior/Management; Social Conflict; Distraction; Harm to Environment; Out of Routine; Student Background Experience; Student/Staff Ratios

Strategy: Field Trips

What: Field trips offer excellent opportunities to incorporate outdoor time. Some field trips are to an outdoor location, others involve walking outdoors either to the location or during the trip; another great option is to make a point of adding some nature in while students are out and about.

How: When planning field trips, use the following question to consider how to add in outdoor time:

Field Trip Location	• Is the location an outdoor location such as a park, community garden, or does it have an outdoor space attached to it such as a playground? • Can you plan a trip specifically to get students outdoors (to a lake, a pond, a nature trail, a meadow, a local natural sight like a waterfall)?
Transport/Breaks/Lunch	• How will you get to the trip? • Can you walk to the location? • Can you walk to a city bus and take that to get there? • If you take a school bus, can you get dropped off a short distance from the location to add-in some walking time? • If students will get a lunch/recess break, can this happen outside? • Can you eat in the grass outside the building? • Can you walk to a natural location just near the building to eat/play?
Adding Nature-In	• Can you have students make some observations about the weather, the natural objects they see or the plants and animals in the area? • Can you incorporate a quick nature scavenger hunt at the beginning, end or break time?

Think broadly when field trip planning. Teachers often choose locations like museums and historic sights but you can take students to a local pond to observe frogs and signs of spring; you can take students to a local trail to do a nature walk; you can take students to a community garden to do observations; you can walk to nearby natural areas; you can tour local natural sights such as lakes, waterfalls or parks; the possibilities are endless! Consider planning a trip for the sole purpose of giving students exposure to nature. Does your community have a university? Can you take students to a location on campus for a special activity and while there, utilize the outdoor space on campus?

When: Field trips can be a great experience any time during the school year.

Who: If you are working as a team to plan the trip, brainstorm ways to add in outdoor time. If you are collaborating with an instructor/teacher from the trip location, consider communicating with them your interest in adding in outdoor time; they might be able to incorporate an outdoor activity into the planned student experience. Teachers can make choices about what types of trips they take their students on. Administrators can support nature-focused trips, or help teachers identify possible destinations.

Materials: Depends on trip.

Why: Since students are already leaving the building for field trips and typical schedules are altered for the day, there are easy opportunities to increase time outdoors. Field trips to outdoor locations provide extended time outside for students while field trips to indoor locations can provide extra outside time during transport to and from, lunch/recess, or brief nature engagement activities at the beginning or end of the trip.

Barriers addressed: Control over Curriculum; Educator Content Knowledge; Out of Routine; Scheduling; Sufficient and Appropriate Spaces; Time Pressure; Time/Space in Standards; Transitions; Transport

Strategy: Flexibility in Scheduling

What: Teachers set and rearrange class schedules to increase time outside.

How: Different schools or districts take different approaches when it comes to curriculum and scheduling. In some places, school or district administrators determine what curriculum will be used (e.g., FOSS kits for science, etc.) or when different activities will occur (e.g., math from 9:30-10:30 every day). In other places, curriculum and/or in-class scheduling is up to individual teachers. While there are parts of the school-wide schedule that are frequently not flexible (e.g., lunch and recess time, art or music class, when the reading teacher comes in a class), allowing teachers flexibility can help facilitate time outdoors. For example, if a class is having trouble focusing in the morning, a teacher may want to shift lesson times around to help the class focus by taking them outside for an activity in the morning instead of the afternoon. Or, if a science lesson planned for Wednesday could be done outside but it's supposed to rain all day, a teacher could switch it with another lesson on a day with better weather. Teachers can increase time outside by being open to rearranging class schedules and flexible when opportunities come up. Administrators can help teachers take advantage of opportunities by supporting flexibility in curriculum and scheduling.

When: Anytime

Who: Administrators and teachers

Materials: None

Why: Flexibility allows teachers to take advantage of opportunities to take students outside as they come up, to plan activities that will work for their particular class context, and avoid losing opportunities because of bad weather.

Barriers addressed: Clothing; Control over Curriculum; Fairness Across Students/Classes; Getting There; Out of Routine; Policies; Scheduling; Services; Sharing Spaces; Time/Space in Standards

Strategy: Free Choice Time

What: If free-choice time is an established part of a classroom schedule, why not take the class outside during that time? An easy option is offering extra recess time on the playground. Other options include offering some play and nature exploration choices for kids such as a nature scavenger hunt, nature art activities, group games, time in the school garden, or time in a section of the woods (if your school has woods near the grounds).

How: Make an intentional decision to offer free choice time outside instead of inside. You can decide how much preparation you want to do. The chart below has some easy choices to offer.

No Prep	Light Prep
• Take kids outside to the playground and monitor free play. • If there is a side garden or side yard, take kids there and monitor free play. • Encourage/lead simple games like Duck Duck Goose, Red Light Green Light, Simon Says, various types of tag. • If there is a woodsy or meadow area near the school, take kids there for some free exploration time set up physical boundary, teach how to play safely with sticks and let them explore.	• Offer to teach a new game kids might not know: Kids Activities Outdoor Games • Print a nature scavenger hunt for kids to complete (some just require observation, others require collecting objects). A quick Google search offers lots of free downloads and ideas. • Bring some simple art supplies for nature inspired art such as crayons and paper for leaf/bark rubbing or glue and construction paper for nature object collages. • Carry out some classroom blocks or table toys typically used during choice time and allow kids to explore and build with these toys while outside.

When: Use the same free choice time that is already in the schedule. Many teachers offer choice time regularly at the end of the day (younger grades) or Friday afternoons (older grades). Or, consider doing free choice time during another part of the week/day. For example, Mondays can be hard days for students to transition back to school, and offering free choice outside might be just what they need to ease back into the school week.

Who: Individual teachers can schedule outside free choice time when it makes sense for their class. Since many teachers often offer free choice on Friday afternoons, think about signing up to use an outdoor space if your school has a sign-up or maybe coordinate with another class to offer some choice activities together and split up the planning.

Materials: No materials, or simple art supplies, nature scavenger hunt sheets, baggies, blocks or toys from the classroom

Why: Since many teachers already offer free choice time in their weekly schedule, taking students outside for it does not require any additional time and provides children with increased minutes outside. Free choice time is easy to plan and organize; kids really like it and are motivated to transition quickly.

Since choice time is often offered at the end of the day, you can have students pack-up before going out to reduce transition time.

Relevant Resources:

- *Buggy and Buddy Printable Scavenger Hunts:* Free printable scavenger hunts for kids.
- *Artful Parent Nature Art for Kids:* Different ideas of nature art activities.

Barriers addressed: Control over Curriculum; Out of Routine; Scheduling; Time Pressure; Time/Space in Standards

Strategy: Gardens

What: School gardens provide incredible opportunities to improve student behavior and academic performance; instill an appreciation for nature and the environment that lasts a lifetime; improve knowledge of nutrition, food systems and healthy eating in children; and much more. School gardens take dedication, time and planning to get started but once they are built, they last a long time and provide endless opportunities for student learning. The process of designing and building a garden can be a learning opportunity in and of itself. There are countless resources available in communities and online to support school gardens. Below is just a sampling of some of the free resources available online that can be utilized in any part of the school garden process including: planning, building, maintaining, growing, harvesting, indoor classroom learning experiences, nutrition education, cooking, and much more.

How: Schools are in many different places in the process of building, maintaining and utilizing school gardens. Wherever in the process though, there are opportunities for engaging students in learning. Some key resources include Cornell Cooperative Extension Garden Based Learning and kidsgarden.org. Please see below for resources, guides, tips and lesson plans for all aspects of school gardening.

Building/Planning Construction	Annie's How-to Guide for Growing School Gardens Cornell University CALS Garden-Based Learning Ithaca Children's Garden Kids Gardening: Starting a School Garden Program Overview
Planning/Planting/Maintaining	Cornell University CALS Food Gardening
Teaching in the Garden/About the Garden (in the classroom)	Cornell University CALS Gardening Lessons USDA Standards-Based Gardening Curriculum for Grades 3 and 4 Denver Urban Gardens School Garden Curriculum
Long-Term Maintenance	Cornell University CALS Sustaining the Garden Healthy Food Choices in Schools: Develop Your Summer Maintenance Plan
Container Gardening	Kids Gardening Container Gardening Dustin Bajer School Container Gardening
Garden Grants	Kids Gardening 2020 Budding Botanist Grant

	Kids Gardening 2020 Youth Garden Grant Annie's Grants for Gardens

When: Gardening can happen all year. The fall is a time for harvesting, maintenance, and winter preparation. Winter is a time for planning, fundraising, ordering and mapping out the spring garden plan. The spring is a time for preparing the garden, planting and maintaining. The summer is a time for continuous harvest and maintenance, which can be a task for the school community. In the midst of the nuts and bolts of gardening, gardens provide year-long opportunities to observe plants through the seasons; adaptations of plants and animals; nutrition lessons; nature observation; writing inspiration; cooking, and much more.

Who: A school can form a garden committee of interested teachers, parents and community members to be in charge of the garden or the garden can be organized and maintained by a particular class/grade or combination of folks. Sometimes a certain grade's science curriculum lends itself particularly well to gardening and that grade can take the lead. In some schools, teachers have designed case study/project-based-learning units that focus on starting/designing a school garden and/or improving an existing school garden. Certain classes take on the planting and maintenance of a certain part or plot in the garden. There are many ways that a school community can utilize a school garden. Most important though is communication and keeping everyone who is utilizing the garden in the loop. Developing online communication pathways, Google Doc maintenance schedules, planning, planting and sign-up documents as well as developing a summer maintenance plan are essential to the sustainability of a school garden.

Materials: Site with sunlight on school property, soil, fencing, materials to build raised beds, garden tools, shed, water source, seeds, signs, containers for storage, watering, and container gardening; compost or organic fertilizer, etc. Materials will depend on what stage a school garden is in and what needs to be done to build/improve/maintain the garden. If there is no space for a garden, container gardening in the classroom or in a side yard is a great option.

Why: Gardens are a natural and easy place to engage students in outdoor learning. There are endless opportunities for nature observation, direct contact with plants, animals and soil, nutrition education, environmental awareness and more. Once a garden is constructed, it provides an ever changing (with the seasons) and evolving (over years) outdoor classroom.

Consider: Are there community partners (Ex: Cornell Cooperative Extension, Garden Clubs, local public gardens, university students) that could be utilized to help create, build or maintain a school garden? Consider writing a grant to get funding to support the construction or improvement of a school garden.

Barriers addressed: Sufficient and Appropriate Spaces; Usefulness of nearby nature

Strategy: Increase Adults Available for Time Outdoors

What: One of the biggest challenges teachers face is having enough staff to safely and comfortably take their class outside. A teacher could take class out alone, but if an issue arises such as a medical emergency or a student needs 1:1 assistance for some reason, being outside alone can be then become stressful and challenging. Having additional adults available can ease this stress and make teachers more comfortable taking a large group of children outdoors. If a class already has an assistant or a student has adult support, then the class comes with an extra adult. If the class does not have an extra adult, providing other options for extra adults is important. Extra adults could be parent volunteers, administrative staff, teaching assistants or roving subs who could go with a class for an outside activity.

How: Finding ways to make extra adults available can provide the needed support to encourage teachers to go outside with their classes more often. There are several options:

Parent Volunteers: There are many parents who are eager to volunteer. If a school has an outdoor space sign-up, parents could check the board or the online doc to see if any classes are going outside at times that work for them and then they can contact the teacher to volunteer to join them. For this to work well, parents need to be encouraged to help any and all classes and not just their own child's class.

Teaching Assistants: There are teacher aids in a building that provide adult support to students for a certain number of hours a day. Sometimes the number of hours on an IEP is less than the hours in the school day. During the extra time, these adults could be made available to help classes going outside rather than just remaining in the classroom where the child they are assigned to is. In addition, teaching assistants may be willing to go outside with a class during their lunch or break. An effective incentive is to offer to pay teaching assistants for their time if they do choose to go outside with a class during their lunch or break. Compensating workers for their time is not just respectful but it also may encourage more folks to volunteer to do so.

Administrators: Administrators can provide support by making themselves available to classes who need an extra adult to go outside. Administrators often have the most flexible schedules of any school staff members and can step in more easily than others. This can also show how much the admin team prioritizes, is committed to, and believes in the benefits of outside time.

Collaborating: When classes combine efforts and go outside together, there are more kids, but also more adults. This support system can make going outside less daunting and guarantees more than one staff person will be present in case of an emergency.

Roving subs: Sometimes there are roving subs in the building to provide coverage for meetings. Administrators can bring in roving subs to provide support to classes when they go outside. A roving sub could be hired for the day and then could assist multiple classes outside.

When: Whenever a teacher requires additional adults to go outside. This will vary.

Who: Parent volunteers, teaching assistants, roving subs, administrators.

Materials: Sign-up system, system for communicating staffing need and filling need

Why: If teachers who need support to take their class outside have access to it, they are more likely to utilize the support and take their students outdoors. This increases outdoor time for students but also builds the capacity of the teachers who eventually may feel comfortable taking a class outside on their

own. Working with another adult while outside can expand a teachers own perspective on how to utilize a space or engage students with nature.

Barriers Addressed: Class Management; Behavior/Management; Getting There; Medical Concerns; Accessibility Considerations; Physical Location; Student/Staff Ratios

Strategy: Involve Students in Planning

What: Include students in the process when planning for time outside. This could include assigning students to ask about time outside, asking students to discuss and identify what activities or how much time the class could do outside, planning and collecting data related to time outside, reflecting on outdoor activities, or examining the impact time outside has on mood or attention. Students could practice multiple writing, communication, math, and science skills through these activities.

How: There are several different ways to involve students in planning time outdoors:

- Assign students to ask about time outside as a classroom job
    - If you feel like you just forget about doing activities outside until it's too late to make it work, consider asking a student to remind you. You could tell the student(s) to ask you at the beginning or end of each week about when the class will go outside during the upcoming week, or assign is as one of the rotating classroom responsibilities (paper hander outer, etc.). This can be a useful reminder, help hold you accountable for planning time outside each week, and help students feel a sense of ownership over the class activities.
- Ask students what activities the class could do outdoors.
    - Look through the daily or weekly schedule with students, and ask them which activities would be reasonable to do outside. Discuss why different parts of the schedule would or would not work well outdoors, and what it would take to make it possible for a specific activity to be outdoors. If students identify an activity, say it will work outdoors, and explain why, they may feel more invested in the activities and making them work outdoors. This could reduce behavior or management challenges while outdoors. Students may also identify activities that teachers did not consider as outdoor opportunities. If this happens, ask them to construct (or write!) an argument to support their claim that the activity would work well outdoors, and if they are convincing give it a try! Consider asking students to reflect on the experience afterwards, whether the activity went as they expected, and what could be done differently next time.
- Set a goal with students for the amount of time the class will spend outdoors.
    - Ask students what they think a reasonable amount of time might be, and why. Ask them to identify the times in the class schedule that would reach that goal. Ask them to explain their suggestions, or construct arguments to support their positions. Have students work in teams to come up with a proposal for a goal, and how to reach it (which activities), and present their proposals to the rest of the class.
- Have students plan data collection projects related to time outside.
    - Students could collect data on outdoor time and activities. Have them record the number of minutes on different days, during different seasons, and/or during different weather conditions. Analyze the data- calculate the total time, calculate a weekly or daily average, make bar graphs of time on different days/weeks/seasons, make graphs to compare the time during different outdoor events to the average time. Have students look for patterns in the data, and construct explanations. For example, does the class often go out on Wednesdays, but rarely on Fridays? Did the cumulative total grow quickly during the fall, but more slowly during the winter? Is the average in March different than the average in April? What might explain these patterns?
- Have students do a self or class reflection after spending time outside.
    - Ask students to write a reflection on whether the class accomplished the goals for their time outside, whether students were focused on the goals, whether students lived up to their parts of the Class Contract (p. 22), or what could they do next time to make sure the class reaches their goals.

- Collect data or reflect on attention or mood
    - Drawing attention to how spending time outside impacts students' ability to focus on learning or their happiness/mood can be a great way to empower students to access the benefits of spending time in nature on their own. Have students record their mood on a simple scale (for example, 5 level smiley face scale) before and after spending time outside, or record how focused they felt during different activities before, during, or after spending time outside. Examine class averages for different activities or different days, and see if there are patterns in mood or attention based on whether the class went out, or what they did outside. Consider doing this anonymously so students can talk about the class data without talking about individual students.

When: Anytime

Who: Teachers and the students in their classes

Materials: Class schedule, discussion time, writing materials

Why: Involving students in planning can help students feel invested in activities, understand the purpose of activities, and understand what they need to do while they are outside. This can increase focus and reduce class management challenges while outside, making the time outside more effective for learning and easier on the teacher. Involving students also offers several opportunities for literacy, communication, math, and science practice, and may lead to new ideas for class activities.

Barriers Addressed: Behavior/Management; Harm to Environment; Remembering to Include Nature; Student Background Experience; Student Interest/Willingness

Strategy: Lunch Outdoors

What: A great way to create calm lunchtimes and increase time outdoors is to allow students to eat lunch outside. A class could decide to have an outdoor lunch with their teacher; a class that is supervised by a specific adult/adults could choose to eat as a whole class outside; or there could be a designated outdoor eating space as part of the cafeteria.

How: Lunch outside could happen in a few different ways depending on how schools organize and supervise lunchtime.

- If one teacher assistant or a set of adults is assigned to monitor a class at lunch, after all students have their trays of food or lunch from home, the assistant could lead the class outside to a specific area of the school grounds to eat. When lunchtime is over, students will need to be prompted to clean-up their trays/trash and head back inside to dispose of their waste.
- If a school has multiple teacher assistants monitoring a bunch of classes at lunch together, consider having a designated area outdoors where children can choose to eat lunch if they want to. One teacher assistant can be assigned to the outdoor space (or more if most students choose to eat outdoors) while the other assistants can stay inside to supervise the cafeteria.
- Another option is as a classroom teacher, to eat lunch outside with your own class. Maybe do this on Fridays, or once a month? We all need to eat and you learn amazing things about your students by eating lunch with them.
- Talk to food service staff to coordinate or collaborate on how to make this work, what structures or processes need to be in place, and whether there are days with food that would be easier to manage outside.

Spaces: Some schools have separate outside areas away from the playground which would be great options to choose if playground distractions are a concern. Students could sit in the grass or on a blacktop. Perhaps advocate (get students to write letters to admin) for a set of several picnic tables to be placed just outside the cafeteria doors to function as an outdoor eating space.

When: During designated lunchtime

Who: Individual classroom teachers may have the choice to take their class outside for lunch on their own time. If administration took responsibility for structuring lunchtime to include an outdoor eating option, lunch outdoors could be much more likely to happen, and to happen more frequently. Administration can facilitate setting-up and supervising an outdoor eating space near the cafeteria. In addition, administration can set-up and teach specific routines for how to choose the outdoor option including getting lunch, moving outdoors, cleaning up, returning to the rest of the class. If a class is assigned a specific adult (some schools do this for each class) or set of adults (think kindergarten or Pre-K), then the entire class can eat outside together. Students can bring their own food outdoors and be responsible for cleaning up. Food service staff could help identify ideas and processes to make this work.

Materials: Picnic tables, designated eating area (could be grass or blacktop)

Why: During lunch, students are already out of their regular classrooms and usually on the first floor of schools with easy access to the outdoors. Incorporating options to eat outdoors is an easy way to add outdoor minutes without taking away from academics or changing the schedule. Students will be more relaxed eating outdoors and often make observations about the world around them while they are sitting and eating.

Consider: Having garbage, recycling and compost bins outside near the eating area would make clean-up easier.

Barriers addressed: Student/Staff Ratios; Time Pressure; Transitions

Strategy: Outdoor Free Play

What: An easy way to increase time outdoors is to provide more opportunities for outdoor free play. This can be done be extending recess time, adding an additional recess or outdoor break and can include play instruction to teach students new games, strategies for playing respectfully with others.

How: Adding extra recess or additional break/play time outdoors can add more outdoor minutes to children's school day without additional planning and preparation. Perhaps take students outdoors 10 minutes or more before recess is scheduled to start. If recess is after lunch, you could come outside at the end of recess and gather your class either for play instruction or explain that they will have additional free playtime. You could teach a new game or have students share different games they already play as a way to teach each other new ideas. In addition, you can model or do role-plays with students about how to solve playground conflicts, how to include others, how to gather people to play a game, etc.

Students greatly benefit from direct instruction around how to use free playtime and how to navigate social situations during free play. Recess is often very unstructured with minimal supervision and engagement from adults. Conflicts often arise during this time that can carry over into instruction. Increasing student's abilities to handle conflicts, play inclusively and more creatively while outside makes outdoor time more fun, more productive and more beneficial for students. See Class Contract p. 22 or Expectations Across Groups p. 36 for more ideas.

If the schoolyard has an outdoor area other than a playground such as a field or woody area, consider taking your students out to that area for some free play/exploration. Again, play instruction here is key. If students have not had a chance to play with sticks before, they could start using them dangerously. Having a discussion and modeling with students how to play with sticks safely and respectfully equips them with the skills to be able to play with them rather than having sticks become off limits. When blanket limits are set on playing with certain items outdoors, like sticks, true outdoor play is limited and stunted. Rather than telling students they can't do something, think about what you need to teach them to be able to do that thing safely.

When: Extend existing recess time or add in additional outdoor free play such as a morning break for 15 minutes or time at the end of the day.

Who: Teachers can take their classes outside for extra free play whenever they find it makes most sense in their schedule. Another option is to have free playtime with a collaborative class such as a buddy class or other sections of the same grade. Classroom assistants can supervise students during outdoor play, which frees up teachers to meet with individual students.

Materials: None (unless materials are needed for a specific game you would like to teach)

Why: Increasing free time outdoors adds outdoor minutes to children's school experience but also adds additional playtime. Play and outdoor time are both essential for healthy development and are both very limited in today's school climate. Prioritizing adding additional free play outdoors is easy to plan and extremely beneficial.

Consider: Consider adding in at least 20 minutes of additional outdoor free play a week.

Barriers addressed: Class Management; Social Conflict; Curriculum Connections; Student Background Experience; Student Interest/Willingness; Values and Beliefs

Strategy: Outdoor "Kits"

What: Pre-packed, ready to grab outdoor "kits" are a great resource to make heading outside easier and take less time. Outdoor kits can be a bin with a lid, a crate or a canvas bag that has all basic materials that might be useful such as sharpened pencils, first aid kit, magnifying glasses, baggies, wipes and the like. Having other items such as clipboards, water bottles and sun hats easily accessible to grab on the way out the door will also make for easier transitions to the outdoors.

How: Taking time at the beginning of the year to create an outdoor kit is well worth the time. Think about what students will need on most outings outside and place those things inside a bin or bag. Leave the bag near the door and just grab it on the way out. Students can assist in replenishing the bag upon return by sharpening pencils or replacing consumable items that were used. The following is a list of items that could go in the outdoor kits along with a list of items that should be easily accessible to grab on the way out the door.

Item Ideas for Outdoor Kits:

- Sharpened pencils (in a baggie, in a pencil tin, or wrapped in a rubber band)
- Set of small magnifying glasses (FOSS kits have great ones, they also sell them at Oriental Trading)
- ZipLoc Baggies (throw in a box of gallon or quart baggies for impromptu collecting)
- Baggie full of colored pencils for observation
- Blank paper (can be kept in a sturdy folder or in several sturdy plastic sleeves for protection)
- First Aid kit with basics like Band-Aids and alcohol swabs for minor injuries
- Student-specific items like Epi pens
- Baby wipes or hand sanitizer

Items that should be easily accessible:

- Class set of clipboards
- Student water bottles
- Camera (or bring your cell phone to take photos)
- Sun hats (have students bring a sun hat to leave at school, look for cheap sales at the end of summer or at the dollar store to buy a stash for the class)
- Crayons for rubbings
- Glue for nature collages
- Reusable canvas bags (these are great for carrying items like clipboards, water bottles, lunches or any items not in the outdoor kit already)

When: Prepare outdoor kits at the beginning of the year. Grab kits on the way outside (if materials are needed for the lesson/activity). Replenish kits upon returning indoors so they are ready for the next trip outdoors.

Who: Teachers can prepare the kits for the classrooms based on what they predict they might need. Administration can support kit development by providing extra sets of magnifying glasses, canvas bags, and other items requested by teachers. Students can be involved with deciding what should go in the kits as well as help with replenishing and maintaining kits. Maintaining classroom outdoor kits can be added to the classroom jobs list.

Materials: Container (canvas bag, plastic bin or crate), pencils, magnifying glasses, colored pencils, baggies, first aid kits, wipes, etc. (see above list)

Why: Already prepped outdoor kits make bringing materials outside easy for teachers and students. This saves transition time and makes last minute or frequent outdoor trips even easier. Student involvement and responsibility for the kits increases investment in spending time outdoors.

Consider: If having doubles/extras of certain materials to stash in outdoor kits is an issue, develop a routine for quickly gathering needed materials for trips outdoors. Students can take on different roles and responsibilities. One can gather pencils, another baggies, another glues; whatever might be needed. The more trips outside, the quicker and easier all of these transitions become.

Barriers addressed: Curriculum Connections; Usefulness of nearby nature; Educator Content Knowledge; Pedagogical Content Knowledge

Strategy: Outdoor Lessons (Teach outdoors instead of in)

What: An easy way to increase time outside without compromising academic time or changing the regular schedule is to simply teach the lesson outside instead of in. Some topics like independent reading or writing are easy to take outside as they involve mostly independent work. Other topics like math, content and strategy lessons can also be taught outside. Perhaps gather students around the base of a tree in the shade and teach the lessons. If your school has an amphitheater or wooden platform, use that space. Working from the beginning of the year on expectations for behavior and learning outdoors will help students be more successful at attending to lessons and staying on task.

How: Consider what subjects or lessons work best for you and your students to take outside. An easy place to start is to do independent reading outside. Then try another subject. It is a good idea to change up which lessons you do outside so that students get a range of experiences and learn to attend to different tasks while in an outdoor space. Make a special indicator for Outside Learning that can be added to your schedule such as a picture of a tree that you can stick onto the subject that will be taught outside. This helps students prepare mentally for the change in schedule and can also help hold you accountable to actually getting out.

Reading: Students can carry their own books outside then select a special spot to sit and read quietly. If you typically do small group reading instruction during this time, gather your group in a circle in the grass, at the base of a tree or at a picnic table.

Math: Bring a portable white board outside with you so you can model problems and demonstrate concepts. If you have students do guided practice with personal white boards, have them carry them out. If you want students to do work in a math book, they can simply bring out their book and pencil and find a quiet place to work.

Read Aloud: Read-alouds are wonderful lessons to teach outdoors. Gather students around you to listen and discuss the book. Think-Pair-Share, Triads, Quads are all easy discussion protocols to utilize outdoors to discuss the text.

Content Lessons: Content lessons can involve a lot of materials but sometimes they simply involve reading a document or article and having a rich discussion. Consider if the lesson can be mobile and moved outdoors. Science and social studies trade books can be read outside, students can work in small groups on developing a poster or reading a book together. FOSS student textbooks can easily be taken outside. Another idea is to have students use sidewalk chalk to show thinking, learning or create concept maps on the blacktop.

Questions to Consider	
Location	• What location on the school grounds would be best for the lesson? • Are there trees to gather under or grass to sit on? • Are there picnic tables or stumps? • Is there a grassy patch just outside your classroom window that you can access quickly? • Is there a wooden platform, stage or amphitheater? • Is there a side garden, a field, or an area away from the playground that will have fewer distractions?
Materials	• What materials are needed for the lesson? • Does the outdoor kit have what is needed (pencils etc.)?

	• Do students need to carry reading books, writing notebooks, math books, white boards/markers? • Would a small/medium mobile white board be useful for teaching the lesson? • Would a folding chair be useful? If students sit on the ground, consider bringing a folding chair so that all students can see you and what you are teaching.
Weather	• What is the forecast for this week? What days might be best for outside time? • Will students need to put on extra clothing to go outside? If so, what? • Is the ground wet? If so, what about keeping a tarp inside your classroom on which students can sit? Can students stand for the lesson? • Is it cold? Can students bundle and enjoy the brisk air for the short time you will be outside? Don't hesitate to take kids out for reading in the winter. Reading in the snow can be quite magical and peaceful! • Is it windy? Will materials and pages blow around, making learning difficult?
Communication	• What adults do you need to communicate the change of location to? Will you send an email, will you tell them in person? Will you have a student bring a note? • Who will sign-out or communicate with the office to let them know where you are headed? • Does your school have a walkie-talkie to take? • Do you have a first aid kit easily accessible? • Do you need to sign-up for an outdoor space (if your school has a sign-up document)? • Have you informed your class of the schedule change? Did you tell them in morning meeting? Did you mark it on the schedule with a visual symbol? • Do you have a sign to put on your door that says where you are?
Student Expectations	• Do you have an outdoor class contract that you can review before heading outside? • Do you have a procedure for addressing students who do not abide by the outdoor learning expectations? • Can the administrative team provide support to help with behavior concerns so the rest of the class (and teacher) can continue outdoor learning? • Have you practiced outdoor learning before this lesson? It is essential to practice before you can expect students to be able to do a lesson outside successfully.

When: Think about how many lessons a week you would like to teach outside. If your goal is 2, think about which lessons in the week would work well taught outside and what the forecast is for different days that week, and then plan accordingly. You could do the lesson at the same time as it is typically scheduled though think about how much time you will need to transition to and from the outdoors. If you have a break or snack in your schedule, consider utilizing that time as the transition time and serving the snack while children work outside. Or, move the schedule so that the outdoor lesson happens at a time when students already have outdoor gear on and are near the first floor (right after arrival, before of after

lunch/recess, before dismissal). While the weather at the beginning and end of the year offer supreme conditions for being outdoors, don't hesitate to take students out for learning in fall, winter and early spring. The benefits far outweigh any inconvenience or brief discomfort.

Who: Classroom teachers can decide what lessons during their week would work best to teach outdoors. If students are pulled-out or if other adults push-in during the selected time, you would need to make a plan with those adults to accommodate the change.

Materials: folding chair, portable teaching white board, tarp, outdoor kit, lesson materials

Why: Teaching regular academic lessons outside is a perfect way to increase outdoor minutes while not taking away from academic time or changing the regular schedule.

Barriers addressed: Control over Curriculum; Curriculum Connections; Educator Content Knowledge; Materials and Funds; Pedagogical Content Knowledge; Services; Time Pressure; Time/Space in Standards

Strategy: Outdoor Topics in the Curriculum

What: There are endless opportunities to incorporate outdoor experiences into curriculum including using the outdoors to teach science topics, teaching students directly about nature and the environment, doing mapping and local geography activities, and more. In some cases, already existing curriculum such as FOSS Science includes lessons to teach outdoors; in others cases, teachers can develop outdoor lessons to teach specific science standards. Doing nature-based/environmental learning with students is incredibly important. This can be done utilizing nature spaces on the school grounds or incorporating activities from existing nature-based curriculum resources.

How: Please see below for some considerations on how to incorporate outdoor learning into different elements of the curriculum.

Science
Science curriculum provides many easy opportunities to teach children in outdoor settings. For example, some FOSS lessons already require teachers to take children outdoors to do particular lessons. Teachers can also choose to teach other science lessons outside by simply teaching the lesson outside instead of in. This would involve prepping materials and bringing them outside, then continuing the lesson as usual. While lessons that have a lot of materials may be more challenging, many lessons could easily be done outside. In addition, teachers can look for particular science standards that would make sense to teach through outdoor learning. The chart below highlights possible science standards from K-5 that would be excellent taught outdoors.

Grade Level	**Science Standards to Teach Outside** (these are examples but not an exhaustive list)
Kindergarten	**K-PS2-1/2 Motion and Stability: Forces and Interactions** --use the playground to investigate how different directions of pushes and pulls impact the motion of an object. Collect and analyze data on how to change the speed or direction of an object with a push or a pull. **K-ESS2-1 Earth Systems**--Take students outside to make and share observations of local weather conditions. Use collected data to describe patterns over time. **K-ESS2-2 Earth's Systems**--Observe trees and plants and animals during different seasons, construct an argument supported by evidence of how plants and animals can change the environment to meet their needs **K-PS3-1 Energy**--Make observations to determine the effect of sunlight on Earth's surface. Place objects of different materials (soil, rocks, cloth, leaves) in different locations and test how much sunlight they absorb by feeling them for heat. Do the test multiple times to discuss the impact of clouds, angle of light coming from sun. **K-LS1-1 From Molecules to Organisms: Structures and Processes** --Observe squirrels or other local animals and notice how what they do helps meet their needs (collect food, build nest, drink water, look for predators)
First Grade	**1-PS4-1 Waves and Their Applications**--Plan and conduct an investigation of how different materials on the playground vibrate to make different sounds (strike plastic, wood, metal, different sized objects) **1-ESS1 Earth's Place in the Universe**--Make observations of the sun, moon and stars to describe patterns that can be predicted. Observe the sun at different times and use that to understand how the earth spins making the sun appear to

	move across the sky each day. Prepare students to make observations of the moon and stars at home with families and share observation in class. **1-LS3-1 Heredity: Inheritance and Variation of Traits**--Observe small plants on the school grounds to notice how parent and offspring plants are similar but not exactly the same. **1-LS1-1 From Molecules to Organisms: Structures and Processes**-- Observe how plants have external structures like thorns. Then make models of how we as humans mimic these structures to meet our needs.
Second Grade	**2-PS1-1 Matter and Its Interactions** --Observe and classify different kinds of materials on the playground by observing their properties (color, texture, hardness, flexibility). Then test different materials for strength, absorption, etc. and make conclusions about why certain materials were used to make certain playground components. **2-LS2-1 Ecosystems**--Plan and conduct investigations to determine if plants need sunlight and water to grow. Use outdoor plants on school grounds. Cover some to limit light exposure, put plastic or Vaseline over some to limit air, etc., then collect data and make observations. **2-LS4-1 Biological Evolution: Unity and Diversity**--Make observations of plants and animals in different habitats (urban yard, small woods, field, whatever is accessible) **2-ESS2-1 Earth's Systems**--Use the outdoors to test how to slow or prevent wind and water from changing the shape of land--use soil, sand, clay and test with wind, water and time.
Third Grade	**3-PS2 Motion and Stability: Forces and Interactions**--Investigate the effects of balanced and unbalanced forces on objects (seesaw, bring materials outside to test, what forces make a ball move, stop, etc), Make observations and measurements about an object's movement (ex: ball) and how to predict future motions. This can all be done with different types of balls outside using tape measures or yardsticks and strings. **3-LS1 From Molecules to Organisms: Structures and Processes**--Observe diverse life cycles in nature (garden plants, plants on school grounds, local animals including small mammals, frogs, insects). Use the outdoors to get students engaged in observation then have them developed models to describe the unique life cycles of these organisms and what they have in common. **3-LS3 Heredity: Inheritance and Variation of Traits**--Students can observe how plants and animals have traits inherited from their parents that are variations of these traits. Use plants and animal located on school grounds to observe. The next step is to observe how the environment can influence traits such as limited water can stunt the growth of a tall plant. **3-ESS2 Earth's Systems**--Use the outdoors to observe and record data about typical weather conditions in a particular season. Then use data to compare to weather in other locations, create graphs and charts.
Fourth Grade	**4-LS1-1 From Molecules to Organisms: Structures and Processes**--Students need to construct an argument that plants and animals have internal and external functions to support survival, growth, behavior and reproduction. Use a school garden, a trip to the woods, or other outdoor observations to gather data/observations to support student arguments. **4-ESS1-1 Earth's Place in the Universe**--Take students on a trip to a local site where they can see evidence of rock formation, fossils, and layers in rocks. Students can use their observation to construct explanations to tell how patterns in rock formation support changes in a landscape over time.

Fifth Grade	**5-LS1-1 From Molecules to Organisms: Structures and Processes**--Engage students in close observation of a variety of plants (grass, weeds, garden plants, trees). Students must use these observations to support an argument that plants get the materials they need for growth chiefly from air and water. **5-LS2-1 Ecosystems: Interactions, Energy, and Dynamics**--Student can use observations from the food chain (sun, to plants, to animals, to decomposers, to compost, etc) in a school garden or other local area to develop a model to describe the movement of matter among plants, animals, decomposers and the environment.

Nature-Based/Environmental Curriculum

Teaching students about nature and the environment have lasting impacts on their awareness and respect of their world. Even if these topics are not included in the science standards for the year, making time for nature and environmental learning is incredibly important and valuable. This learning can be approached in two ways: Use existing nature-based and environment curricula (which there are many) or create your own based on what students are interested in or what is available on the school grounds.

Existing Nature-Based/Environmental Curricula	**Access**	**Content**	**Link to Standards?**
Green Schools Initiative Sustainability Curricula Directory	Free, no enrollment needed	*Directory of many links categorized into 4 Pillars of Sustainability:* *1. Strive to Be Toxics-Free* *2. Using Resources Sustainably* *3. Green Schoolyards/Healthy Kids* *4. Teach, Learn, Engage*	Directory states whether each link listed is linked to standard or not
National Wildlife Federation Lesson Plans and Webinars	Free, no enrollment needed	*Lesson Plans and Webinars revolving around life science, ecology and biology*	All lesson plans aligned to **National Science Education Standards** with different grades listed for lesson plan
The Nature Connection: An Outdoor Workbook for Kids, Families and Classrooms	Available for purchase - Amazon	*Practical and engaging workbook guide to involve kids (Grades 3-8) with nature*	N/A
Handbook of Nature Study	Available for purchase - Amazon	*Handbook written for elementary school teachers about the natural environment*	N/A
Project Wet Educators Guides	Available for purchase on website	*Collection of educators' guides and lesson plans, ranging from different grade levels, subjects and specific topics*	Linked to different standards including **NGSS, Common Core ELA, Common Core, Math**

National Geographic Education Resource Library	Free with a registered account	*Lesson plans, activities and other educational resources for educators covering many subjects for varying grade levels*	Linked to different standards including **NGSS, Common Core ELA, Common Core, Math**
Green School Yards America Guides	Free, no enrollment needed	*Activity guides providing various outdoor activity ideas for children between 3~18 years old*	Linked to different standards including **NGSS, Common Core ELA, Common Core, Math**
School Garden Project Curriculum Resources	Free, no enrollment needed	*Lesson plans for educators to help establish garden learning programs through STEM curricula for various grades*	Linked to **NGSS**
Boston Schoolyard Initiative Teaching Science	Free, no enrollment needed	*Guides to teaching Science in the Schoolyard FOSS Kits curricula outdoors for various grades*	Linked to **NGSS**

Creating Nature-Based/Environmental Learning Using School-Grounds

If a school has a woods or meadow on or near the grounds, consider using the location to teach students about nature and environmental topics. Possible research question include:

- What animal and plants live here?
- How do living things interact to create an ecosystem?
- How do animals and plants meet their needs in this location?
- How do humans impact these environments?
- How are the living things found here similar and different?
- How have plants and animals adapted to living in this environment?

Depending on the age of the students, younger students may simply collect some specimens and make observations about structure and movement. Older students might look closely for evidence of plant and animal adaptations.

School Gardens

If your school has a garden, there are many ways to use the garden to teach children about plants, health, nutrition, and the environment. Some research questions include:

- How do plants in the garden grow and change?
- What do plants need to survive and grow well?
- What parts of plants do we eat?
- How are plants in the garden similar and different?
- What is the life cycle of garden plants? How do life cycles compare?
- What role do people play in the health of the garden?
- What is the role of soil health in growing healthy food?
- See School Gardens p. 42 for more information.

Who: Teachers can make deliberate decisions about what lessons to teach outdoors, what curriculum to use to support outdoor learning and what science standards to teach outside instead of in. When teachers keep the goal of increasing time outdoors as part of their planning, they will see new ways to teach lessons outside, use the outdoors to teach science standards and find time in the schedule to incorporate

outdoor learning opportunities. Administrators can support this by encouraging teachers to take students outside, facilitating access to available spaces, and providing access to existing nature or environmental curricula.

Materials: Materials for science lessons, access to existing nature-based/outdoor curriculum, access to school garden if available.

Why: Teaching science topics/lessons outdoors as often as possible provides an easy way to increase time outdoors without taking away from standards-based instruction. Utilizing existing lessons and resources for nature/outdoor-based learning can make planning simple while creating meaningful experiences for students.

Consider: Consider if there are any local outdoor sites that lend themselves to teaching a science standard and if so, plan a field trip.

Barriers addressed: Curriculum Connections; Educator Content Knowledge; Pedagogical Content Knowledge; Time Pressure; Time/Space in Standards

Strategy: Professional Development

What: Professional development workshops with school staff focused on content, pedagogy, opportunities, barriers, and benefits related to taking students outside.

How:
Hold professional development workshops with school staff to discuss different aspects of taking students outside. Do this as part of a regular professional development or staff meeting series, or meet as a small group for interested staff. Professional development can increase confidence, interest, and motivation among teachers, as well as provide practical strategies and ideas. Consider:

- *Cover content, pedagogy, or management topics*.
    - Content- outline when there are opportunities to take students outside in the curriculum used at your school. (See Outdoor Topics p. 56, Outdoor Lessons p. 53, Outdoor Kits p. 51, Social Emotional Learning p. 71, Specials p. 75, Transit p. 77, Field Trips p. 37, Free Choice Time p. 40, Lunch Outdoors p. 48, Energy and Emotional Breaks p. 34, Outdoor Free Play p. 50 , Shared Experiences p. 67, for details.)
    - Pedagogy- discuss teaching approaches and tips that work well outdoors – some activities can be done the same outside as in, some may go better with small changes, and some might be enhanced by time outdoors. (See Outdoor Topics p. 56, Outdoor Lessons p. 53, Outdoor Kits p. 51, for details.)
    - Management- discuss outdoor class management and strategies that can help keep students focused and safe. (See Transitions p. 78, Routines p. 64, Class Contract p. 22, Involve Students in Planning p. 46, Small Group Time p. 69, Expectations Across Groups p. 36, for ideas.)
- *Talk about the benefits*. Share the benefits outlined in the beginning of this toolkit (p. 3-5) to encourage staff to try taking students outside. Use the research studies to make a case for how time in nature can support different components of student development and success, or can address specific topics at your school.
- *Talk about barriers*. There are many factors that can limit or prevent teachers from taking students outside, and teachers likely experience different barriers at different times. Some barriers can be addressed individually, but others may require group or administrative actions. Discussing barriers as part of professional development can help identify things teachers might encounter at your school, and provide an opportunity to brainstorm solutions. Use the barriers outlined in this toolkit (p. 7) as a starting point, or ask teachers to share their experience to identify your own list.
- *Review existing outdoor curricula or lessons.* Have teachers that already take students outside at your school describe what they do- when, where, why, who, what resources they use, and how it goes for their classes, or go through curricula that are available online and discuss how they could be implemented at your school. See Outdoor Topics (and especially, the section on existing nature-related curricula) p. 56 for ideas.
- *Workshop at end of this toolkit.* Use the workshop outline at the end of this toolkit (p. 81) to run your own workshop. Go through the whole thing, or do the pieces that make sense for your school.
- *Conduct professional development outside:*
    - Have a regular school staff meeting outside to look at the school yard, discuss ways to use different spaces, brainstorm ideas or potential space development options, and let staff experience the mental and emotional benefits of spending some time outside.
    - Take staff outdoors to try an activity. Some activities work equally well for adults as kids—consider taking staff outside during a staff meeting to find a ‘sit spot’ and write a reflection, or find 10 different species living in an area, or to draw a map of the school

yard. These activities can be used to start a discussion of the benefits and opportunities related to taking students outside at your school.

When: Staff meetings or professional development days

Who: Teachers and administrators

Materials: Toolkit, existing curricula

Why: Professional development can spark interest, increase confidence and knowledge, provide practical support, introduce new resources or curricula, and encourage teachers to take students outside.

Barriers Addressed: Usefulness of nearby nature; Educator Awareness; Educator Content Knowledge; Educator Interest/Willingness; Educators' Time; Pedagogical Content Knowledge; School Culture

Strategy: Resource list/database of local options

What: A list of local resources for teachers.

How: Compile a list of resources teachers can use to increase the time students spend outside. This could include organizations or groups that will come to the school to run programs, volunteer organizations that can connect teachers with local volunteers, locations for nature-filled field trips, or links to locally-relevant curriculum or activities. This could also lead to multiple connections between each resource and the school, and foster extended relationships between schools and community resources.

When: Anytime.

Who: Anyone in the school. Identifying one person (perhaps an administrator?) to maintain the list can help keep it relevant.

Materials: A physical or digital list. An online resource like a Google doc or section of the school website could be a good option.

Why: There are often many more resources in an area than any single individual knows about. Having a list can help teachers find and connect with resources in the community.

Barriers addressed: Usefulness of nearby nature; Educator Content Knowledge; Materials and Funds; Remembering to Include Nature; Sufficient and Appropriate Spaces

Strategy: Routines About Going Outside

What: Setting up clear routines for taking children outdoors is essential to making time outdoors safe, effective for learning, time efficient and enjoyable for all involved. Take the time at the beginning of the year to set-up clear routines for how to transition from the classroom to an outdoor space, for behavior and expectations when outdoors and for how to work outdoors. Administration can set-up school-wide routines such sign-out procedures, sign-up calendar or Google Doc, routines for safety such as access to first aid, nurse and appropriate clothing, and who to contact in an emergency.

How: The beginning of the year is all about setting up routines for transitions, for behavior, for work-time. Make a point of talking with students about the benefits of spending time outdoors. Perhaps share with them some of the research and the reasons why going outside is good for kids. Then intentionally teach and practice routines for transitioning outdoors, behavior outdoors and working outdoors. The more frequently your students get to practice this, the easier the transitions will be. The following chart includes some questions to consider when setting-up, discussing and teaching routines with students.

Consider Routines for Transitions

- Will children need to put on coats, boots, shoes?
- Will children line up in the room or in the hallway?
- Do you need to stop at the office or send a child to sign-out or get a STOP sign?
- Will children walk in a single-file line or in pairs? Are pairs set? Do children pick their partners each time?
- How much time does it take us to get ready? Time students. Can we get ready faster? Quieter?
- Will you take water bottles outside? Will students carry their own or will you use canvas tote bags or a bin to carry them?
- Will you tell students ahead of time that you will go outside? Would an announcement in the morning, or a symbol on the daily schedule (a tree or sun?) help students mentally prepare and ease the transition?

Consider Routines for Behavior/Expectations

- What are safe behaviors for walking in the hallway? Walking outdoors?
- How can children be safe outdoors? (stay with the group, listening ears, stay on task, be aware)
- How do we use outdoor spaces differently throughout the day (recess, work time, afterschool) and how do expectations for behavior change depending on how we use the space?
- How do children use the bathroom when outdoors? Do they need an escort? Is there a door they can knock at to get in the building?
- How can you contact nurse, admin in an emergency? Will you have a special outdoor pass a student can bring inside to an adult to get help? Will you have your cell phone on and with you?

Consider Routines for Outdoor Work-time

- What are our expectations for work-time indoors? How can we transfer these to outdoors spaces?
- How can we use our work-time outside effectively so we can go outside more often?
- How can we sit in different formations for learning--circle, group looking at teacher, pairs, triads. How fast can we get into these formations and be ready to learn/work? Can we do this faster?
- What can we do to ignore distractions (sirens, other kids playing, construction, cars, birds and bugs)
- What can we do if it is too wet to sit? Can we practice listening and working while standing?

- How can we safely carry our materials outside? Do we want to use reusable shopping bags, bins or just our arms?
- Should we have an outdoor supply box ready to grab? If so what should go in it (first aid kit, pencils, clipboards, magnifying glasses, let kids help decide what should be in this)?

Consider Administrative Routines

- How will teachers sign-out or inform the office of their whereabouts?
- Will teachers need a STOP sign to cross streets? Who will keep it, and how will teachers get it?
- Must classes stay on school grounds or can they utilize a park two blocks away?
- Do students need to have walking permissions forms signed and on file for close walking trips?
- What procedures should teachers use to contact the school in an emergency? Should they call the office, the principal, the nurse?
- How can children get into the building to use the bathroom or get water if all doors are locked? Do they need to go around to the main door? Can they knock on a window or a door? Are there support staff or teachers assistants who can be supportive of this?
- Will the nurse have first aid kits available? Will the nurse have extra shoes, coats, hats and gloves to support going outside?

When: Take time at the beginning of the year to set-up and practice routines for going outside. These may change as the weather changes such as putting on coats and boots or hats for sun. Administration can work on developing and improving school-wide routines to support outdoor learning.

Who: Teachers must think carefully and intentionally about how they want to set-up routines in their own room and then teach/practice them with students. Administration and the nurse play a vital role in setting-up, communicating and maintaining school-wide routines.

Materials: Posters or signs with procedures, steps, expectations for outdoor learning. STOP signs, sign-out sheet, sign-up document to reserve outdoor spaces.

Why: Clear and consistent routines will make taking children outdoors easier and more effective, thus, more likely to happen. Making transitions efficient, quick and safe will mean it takes less time to get outside so teachers may be more likely to take children out as well as go out when there is only a short time available. Clear expectations and procedures for behavior will help students be safer and make better choices which will make outside time less stressful and concerning for teachers. If students get used to working effectively outside, teachers will be more likely to take students outside for regular work-time as they will be confident that students will be able to complete work and learn effectively.

Barriers addressed: Behavior/Management; Class Management; Clothing; Concerns About Dirt; Distraction; Educators' Time; Nature Concerns; Out of Routine; Remembering to Include Nature; Student/Staff Ratios; Transitions

Strategy: Schedule It In

What: Scheduling time outdoors can seem daunting as school days can feel overwhelmingly busy. A great place to start is to schedule time outdoors at the same time each week, as you would schedule another subject like art or read-aloud. If you have a set-time in your schedule, you will be more likely to stick to it and take kids outside. Another way to think about scheduling to ensure all kids get opportunities to be outside is to schedule each grade to go outside during a certain day. For example, First grade could have Mondays, Second could have Tuesdays, etc. This way, the expectation school-wide is that each class gets outside once a week. If there are multiple sections of each grade, classes could be scheduled for a time slot morning, midday or afternoon or could be responsible for choosing a time on their assigned day. Administration can create a school-wide schedule as a first step in making outdoor time a priority for the school, or teachers can include outdoor time in their weekly planning.

How:

Individual Teachers

When planning your weekly schedule, consider a time when you can take students outside every single week. Perhaps Friday afternoons, or Monday mornings? If you intentionally put outdoor time in your schedule it is more likely to happen. Once the time is scheduled, you can consider if you want to use the time for nature exploration, science lessons, free time, academic work time, etc. You could do something different each week depending on what you feel your student's need or what needs to get done. It is important that the chosen time is communicated with support teaching staff so that students are not pulled out for services during outdoor time.

School-Wide Scheduling

Administrative teams can create an outdoor schedule for the school. One option is to assign each grade a day and let each class determine the time they will go outside. Another option is to assign each class a time each week, in the same way art or music classes are scheduled. Recess, lunch and special times must be considered. Having a set-time at the beginning of the year will allow teachers and support teachers to coordinate when services will be provided to students and make sure that no child is being pulled out during the classes' outdoor time.

When: A set-time each week either determined by individual teacher or by school administrator.

Who: Individual teachers can decide a time to take students outside and can coordinate with support teachers so all students can participate in this set outdoor time. Administration can take the lead in creating a school-wide schedule to ensure every student gets outside at least once a week (besides recess).

Materials: Depends on what activity or lesson a teacher decides to do each week.

Why: Setting-up a set schedule either in the classroom or as a school makes planning easier, ensures that students get outside at least once a week (besides recess) and gives outdoor time priority and value just as other subjects. Taking these steps will guarantee students have increased access to time outdoors.

Consider: Make this outdoor time meaningful. Talk with kids about the value and benefit of going outside. Have them give input on how the time could be used. Use this time to help make outdoor spaces at your school even better (do some designing, writing to admin, weeding, planting, etc).

Barriers addressed: Clothing; Concerns About Dirt; Fairness Across Students/Classes; Accessibility Considerations; Nature Concerns; Out of Routine; Policies; Remembering to Include Nature; Scheduling; Services; Sharing Spaces; Student/Staff Ratios; Treating Time Outside as a Reward

Strategy: Shared Experiences

What: For many students, having shared experiences with their peers is essential for community building, developing ideas for writing, increasing background knowledge and more. Creating activities for students to engage in outside in order to have these shared experiences is a great way to utilize outside time.

How: When planning for a shared experience, think about how you could use the outdoors when thinking about the following questions:

- What do I want students to get out of this experience?
- Do I want students to experience something together they can all reference for a discussion or a writing piece?
- Do I want to build community?
- Do I want to expose students to a new idea?
- Do I want to activate prior knowledge about a topic?

Activities could include:

- team building games outside during the beginning of school
- an obstacle course for students to complete on the playground and then use as a start for a writing piece
- a scavenger hunt across the schoolyard to foster teamwork at the beginning of the year
- observing the weather using their senses over a period of a few days to activate and build prior knowledge before the launch of a weather unit
- nature walks or listening for sounds to provide a common experience as a catalyst for a creative writing project

When: Anytime. Can be especially useful at the beginning of the school year.

Who: Teachers

Materials: Depends on the experience

Why: Building community, creating shared experience or activating background knowledge can all be enhanced by doing them outside. If activities are already being planned into a school day to reach these goals, there is no better way than to get children outside to do these. Rather than writing about summer vacations, go on a nature walk and write about that! Rather than doing a team building activity in the classroom, go outside and do it there! These are natural and easy places to increase time outside while utilizing already planned time. The lasting impact of these experiences will be greater and more meaningful for students when they are outside.

Barriers addressed: Class Management; Fairness Across Students/Classes; Out of Routine; Scheduling; Student Background Experience; Time Pressure; Time/Space in Standards; Values and Beliefs

Strategy: Sign Up for Spaces

What: To effectively utilize, share, and plan for outdoor space use, schools can create a system for signing-up or "reserving" outdoor spaces. This could be possible through a clipboard or poster in the main office or an online Google Doc or calendar.

How: First make a list of all of the outdoor spaces on the school grounds. Next, figure out what system would work best for the staff--an electronic system that can be accessed anywhere by anyone and be seen by everyone? Or a paper system that people can go to the office to check or reserve? Once this is decided, list the outdoor spaces on the sign up system for each day. Classes could sign up for a space for a range of times--as short as 15 minutes to as long as half or full day depending on the plan/goal of the planned activity. You could also have a similar system for classes to sign up for extended projects in one location, if they need something about those spaces to be held constant. For example, observing how birds use a specific area, measuring rainfall, or observing particular plants during different weather conditions are great activities that depend on some outdoor item staying relatively undisturbed over time. A school-wide system could allow classes to alert others that a long-term project is happening, and ask them not to disturb critical pieces.

When: Setting up a sign-up system at the beginning of the year and teaching staff how to use it through a staff meeting or professional development event will encourage teachers to use the spaces, remind them of the many places on the school ground they can go, as well as teach them the procedure for how to sign-up for the rest of the year.

Who: An administrative staff person or a designated staff member should take responsibility for maintaining sign-up sheets whether paper or online and update them as needed.

Materials: Google Doc, online spreadsheet or online calendar, large paper calendar or printed sign-up sheets

Why: Having a sign-up system is important for ensuring that multiple classes don't end up outside, in the same space, at the same time. It can also serve to expand some teachers thought process on where they can take their class or how they can use the outdoor spaces at the school, therefore encouraging them to try going outside more often.

Consider: Is your school already using Google Docs? Are they tech savvy? Do they prefer pen and paper communication? Think about what your staff is most likely to use with consistency.

Barriers Addressed: Remembering to Include Nature; Scheduling; Sharing Spaces; Sufficient and Appropriate Spaces; Time/Space in Standards

Strategy: Small Group Time

What: During many parts of the school day, students work in small groups. In some cases, students are working in multiple small groups in the classroom with just their teacher; in other cases, there are reading specialists, special education teachers and teacher aids who are also working with/leading groups. These instances where multiple adults are in the room are excellent opportunities to take parts of or the whole class outside.

How: Think creatively about how you could bring small group work outdoors. If you begin doing this at some point during the week from the beginning of the year, children will learn the routine and expectations for working outdoors. If you have small group learning with adult support 3-5 days a week, choose 1 day a week where you do the lesson/work outside. This would involve making a plan in advance with partner teachers/aids.

Lesson Considerations
Decide if you will continue with the academic lessons or use the time outdoors as an opportunity to develop a new skill. For example, if you have a reading intervention group you could simply bring your books/materials and do the lesson outside OR you could teach a comprehension strategy using the outdoors like cause and effect, or sequencing. Doing a lesson on expanding vocabulary using the senses would be an excellent match for the outdoors and would support student writing skills.

Who Will Go Out
Consider if all small groups will go outside at the same time or if some go out on one day, leaving a quieter working space for the groups that remain inside. Then switch and have the groups that were inside go outside on another day. If you have adult support in your room, utilize it and be creative with scheduling to support your students' needs. If students need quiet to work, having some groups work outside provides this quiet space.

Set Schedules/Routines
Setting up a regular routine and schedule will make taking children outside during small group time most effective. In the beginning of the year, decide which day of the week all or each group will go outside and when. Then teach the routines for how to work effectively in small groups outside. As the year progresses, students will be able to attend to their work both indoors and outdoors. The regular schedule will also alleviate constant planning/coordination with teachers. If there is inclement weather, have a plan to do small groups indoors as you would on the other days. If it is cold or snowy, bundle up and consider going outside anyway or find a way to incorporate movement into the small group lesson to keep kids warm.

When: Times in your schedule when you have small group work occurring or when you have additional adults leading small groups (reading and special education teachers, teacher aids).

Who: Teachers need to coordinate with their support staff to confirm scheduling. Administration can support this work by encouraging teachers to take children outside for work time. They can also support the construction of workspaces outdoors such as picnic tables (great for small groups), stumps, shade sales, etc.

Materials: Students/teachers can take what they would typically use for small groups lessons outside such as a writing notebook, a reading book, pencil, etc.

Why: Small group time provides easy opportunities to take students outside, as there are often additional support staff/teachers in the room or working with students. Sometimes students already transition to a specialist's room for a small group and instead could head outside for their group thus not adding any additional transition time. Having some groups work outside while others work inside can create a quieter learning environment for students both inside and outside. Utilizing times when multiple adults are in the room provides added support for behavior, transitions and supervision of outside time.

Barriers addressed: Class Management; Fairness Across Students/Classes; Scheduling; Services; Time/Space in Standards

Strategy: Social Emotional Learning

What: Connect time in nature to supporting Social Emotional Learning (SEL) goals.

How: Social and emotional learning is an important part of school goals. Research indicates that time in nature can support many of the outcomes in the social and emotional learning benchmarks. Leverage time in nature to support social and emotional learning, and leverage supporting social and emotional learning goals to increase support for time in nature.

New York State developed social and emotional learning benchmarks for students based on the following goals:

1. Develop self-awareness and self-management skills essential to success in school and in life.
    A. Identify and manage one's emotions and behavior.
    B. Recognize personal qualities and external supports.
    C. Demonstrate skills related to achieving personal and academic goals.
2. Use social awareness and interpersonal skills to establish and maintain positive relationships.
    A. Recognize the feelings and perspectives of others.
    B. Recognize individual and group similarities and differences.
    C. Use communication and social skills to interact effectively with others.
    D. Demonstrate the ability to prevent, manage, and resolve interpersonal conflicts in constructive ways.
3. Demonstrate ethical decision-making skills and responsible behaviors in personal, school, and community contexts.
    A. Consider ethical, safety, and societal factors in making decisions.
    B. Apply decision- making skills to deal responsibly with daily academic and social situations.
    C. Contribute to the well-being of one's school and community.[65]

Research has found that spending time in nature can increase emotional wellbeing, resilience to stressful events, emotional regulation, self-confidence, self-esteem, cooperation skills, and positive relationship development (see p. 3-5) —all factors that can help students reach the SEL benchmarks. Use time in nature as an additional tool to help students reach these benchmarks. To increase support for time in nature among school or district staff, point out the many connections and benefits of time in nature, and how it can help students reach these goals.

Additionally, engaging students in thinking about interacting with the environment, or developing and caring for natural spaces in their school or neighborhood, can be a great way to support engaging in ethical and social decision-making (3A, 3B) and contributing to the well-being of their school or community (3C). Make the well-being connections to nature explicit, or have students reflect on how caring for natural spaces supports their own and their communities' well-being, to help students understand the connections between the environment and human health.

When: Anytime

Who: Teachers, staff, administrators

Materials: The research outlined in this toolkit (p. 3-5)

Why: Linking time in nature to other school goals can help increase support for taking students outside, and can help enhance efforts to reach school goals.

Barriers Addressed: Social Conflict; Control over Curriculum; Curriculum Connections; Out of Routine; Time/Space in Curriculum

Strategy: Special events

What: Hold special or school-wide events outside instead of in.

How: If the school is planning a special event, consider holding it outdoors instead of in. For example, if you are planning an assembly in the gym, consider holding it on the playing field. If there is a hill on the school grounds, use it for natural stadium seating for school plays, choir concerts, or talent shows. Set up book fairs outside like a farmers' market. If weather is unpredictable in your area, think about which activities can be moved easily (e.g., an assembly with one speaker is easier to move than a play with sets and props) and decide on the day of the event if it can be done outside.

When: Whenever there is a special event.

Who: Administrators, event organizers, attendees.

Materials: Depending on the event, some chairs or outdoor tables might be helpful.

Why: During special events, students are already out of the classroom and out of their normal routine. This could be an easy time to add outdoor time that would not reduce instructional time or require extra planning, transitions, or classroom management efforts from the teacher. Additionally, there are typically multiple adults present at special events, who could help with student/staff ratios and monitoring behavior while outside.

Consider: Hold staff meetings outside to add some nature time for school staff too!

Barriers addressed: Out of Routine; Scheduling; Time Pressure; Time/Space in Standards

Strategy: Special Spaces

What: Specific areas of the schoolyard that are 'special' for each class or each student.

How: Select an area in the schoolyard that will be special for each class, and then visit that area regularly. This can be done by individual classes, or coordinated across a school. For example:

- **Sit spots**- have students pick a specific spot in one area that will be their 'sit spot'. Take the class to that area regularly for activities that can be done in their spots. Activities could include independent reading, writing, or work time, or more structured activities such as cataloguing all the different plant/animal species they can see and sounds they can hear from their spot, or observing how their sit spot changes during different seasons or weather conditions.
- **Class caretaking**- have each class or grade pick a part of the schoolyard they will take care of throughout the school year. Take students to that area regularly for various activities related to that area. Activities could include:
    - mapping the area at the beginning of the year
    - cataloguing all the plants/animals that live there
    - observing what happens in the area during different seasons or weather conditions
    - gardening or ground keeping activities such as planting native plants or keeping the area clean of leaves or weeds
    - building or maintaining birdhouses or feeders for the area
    - building or maintaining a sound garden, activity trail, benches, or other things to encourage people to use the area
    - planning how to make the area more sustainable or better for class use

Use whatever spaces are available— consider putting garden boxes on paved spots or working with your class to transform grassy strips along sidewalks or the building into gardens or activity trails. Sharing an area with another class or grade can be a great way to foster collaboration and connections within the school!

When: Start at any time, and continue throughout the school year.

Who: Anyone who takes students outside.

Materials: Outdoor space.

Why: Returning to and spending extended time in a specific outdoor spot can help foster students' connection to that spot and their sense of belonging in a place. This can help build community among students, and supports the development of positive attitudes about the environment. Additionally, returning to the same spot can make an outdoor activity into a routine that students understand and know how to follow. If students know what to do when they go to their special spots, less time and energy needs to be spent on managing student behavior, which can make time outside easier and more useful.

Barriers addressed: Behavior/Management; Class Management; Distraction
Usefulness of nearby nature; Harm to Environment; Out of Routine; Physical Location; Remembering to Include Nature; Sharing Spaces; Student Background Experience; Student Interest/Willingness; Student/Staff Ratios; Transitions; Values and Beliefs

Strategy: Specials (PE, Music, Art) Outdoors

What: Specials classes including art, music and PE could incorporate opportunities to take children outside. In this case, the specials teacher would do the planning and inform the classroom teachers if students are to bring specific clothing items or materials.

Why: Providing opportunities to get children outside during specials is an easy way to incorporate additional outdoor minutes into children's school experiences and can provide an exciting way to engage students in specials.

How: Specials teachers would need to consider scheduling, weather and curriculum and choose opportunities that would make sense to take children outside. This would involve flexible thinking and planning as it might mean one 3rd grade class gets to do an activity outside but another 3rd grade class doesn't if the weather changes during a week.

One option is doing an activity that could be completed inside or outside which would be easy for planning. In PE, you could teach or play a game that could happen indoors or outside such as tag, a simple relay race, a sports game like soccer or basketball, etc. In art, you could work on sketching small objects either natural objects such as bark, stones, leaves while outside or indoor objects while indoors, or nature objects could be collected and brought into the classroom in the case of inclement weather. In music, a teacher could teach the lesson outside if it doesn't involve a lot of large instruments--small instruments could be carried outside by children, singing (copy song sheets rather than project on a screen) and making simple rhythms with bodies could all easily be done outside.

Another option would be to create a lesson that utilizes the outdoors (and nature when applicable). In PE, a simple exercises obstacle course could be created using the playground (5 mountain climbers holding onto base of slide, 3 pull-ups on the monkey bars, etc.). Children could complete an outdoor running course around the school grounds. Music teachers could teach a lesson on vibration and sound using objects on the playground--exploring what tones are created when certain places are struck with a drumstick. Students could create a playground symphony by creating and playing rhythms on the equipment. Art classes could make rubbings of natural materials and then use their rubbings to create collages. Students could collect nature objects and incorporate them into artistic pieces.

When: During existing specials times

Who: Specials teachers would be in charge of planning but would need to communicate with classroom teachers if students are to be dropped of at a different location (such as playground rather than classroom) or if students need to wear specific clothing (coats, etc.).

Materials: Many lessons would require the same materials as if the lesson were done indoors. Students would need to be involved with carrying materials outside. For example, carrying sketchbooks and pencils or clipboards and crayons. A set of reusable canvas bags could be part of an art room so that students could grab them easily to collect outdoor objects. Small musical instruments can be carried outside for music lessons. PE teachers can have children bring necessary sports equipment outside.

Barriers addressed: Curriculum Connections; Control over Curriculum; Out of Routine; Scheduling; Services; Time Pressure; Time/Space in Standards

Strategy: Stack Outdoor Times to Reduce Transition Time

What: Transition time preparing for (getting gear on) and getting outside can take a long time, especially if children are younger or if students have not mastered a routine. Lengthy transition time can be a deterrent to taking classes outside. A solution to this is stack outdoor times alongside another time when students already have their outdoor gear on and are already near outside spaces.

How: If transition time is a concern or if it is winter and a lot of gear must be worn to be safe outside, consider planning outdoor time during one of the following times:

- Immediately after arrival in the morning (since students arrive at different times and some get breakfast, perhaps have all students meet in the classroom first, keep gear on, then walk outside together)
- Before or after recess/lunch
- Before the end of the day

Adding a few minutes of outside time stacked alongside recess or the end of the day can really add up over time. For example, 15 minutes a day is over an hour by the end of the week. Over 4 hours in a month, etc. When outside for only a few minutes engage students in quick observations such as: close eyes and listen for 5 sounds; use senses to observe the weather; take a walk around the school and notice similarities/differences of plants, leaves, flowers; do a race using different movements (skip, hop, one-leg skip). These quick activities engage students in observation and active movements while easily increasing daily minutes outside.

When: Stack outdoor times when students are already wearing outdoor gear such as after arrival in the morning, before or after recess/lunch, before the end of the day.

Who: Teachers can plan to stack outside time if it will save transition time and make going outside more likely to happen. Engage the support of teaching aids and others who monitor kids during recess or transition students around the building. Inform such adults of plans to go outside so they can remind students to keep gear on and get ready for learning time.

Materials: None

Why: Stacking time outside along times when students already have gear on and are close to outside spaces is a great way to save transition time. Adding a 10 minutes or more a day outside (for example, before recess) can result in close to an additional hour of time outside over the course of week. The cumulative effect of this additional time outside has many benefits for students.

Barriers addressed: Time Pressure; Transitions

Strategy: Transit- Walk Outside When Transitioning Around Building

What: A super easy way to add in outdoor minutes is to walk outside instead of in the hallway when moving about the school. For example, if your students need to go to gym, walk to the first floor, out the closest door, around to the door closest to the gym, and then back in and to the gym. If you have more time, you could take a lap halfway or all the way around the school.

How: Think in advance about a transition to a different location in the building that could utilize walking outside. Inform students about the purpose of the outside walk (to get more time outside, breath fresh air, notice nature, be present) and the route the class will take. Try different routes depending on where the class is going. Perhaps you walk around the building on the way back from lunch or recess when students already have coats. Perhaps you head outside on the way back from art and take a brief moment to close eyes and breath while outside. While this outside walk might take a minute or two longer, getting a moment outdoors will benefit students and will be worth the extra time.

When: Whenever the class is transitioning to a different location in the school--cafeteria, gym, art, music, library, etc.

Who: Any teacher or teacher assistant who helps students transition in the hallway to different locations around the school could decide to walk outside instead of in.
Administrators could set up a simple way for teachers to inform the office when they will take this quick trip outside, and help teachers access multiple exit/entry points.

Materials: None

Why: Since the class is already leaving the room and spending time walking in the hall, why not walk outside instead to get some extra outdoor time in? It is easy, quick, takes almost no planning, and does not require an additional transition specifically to go outside.

Consider: Consider which doors you have a key or access to. Some schools provide teachers with key card ID badges that access all major doors, others still use hard copy keys. If you need access to an additional door/doors to make these outdoor transitions possible, consider asking the school secretary or custodian for extra door keys.

Barriers addressed: Control over Curriculum; Materials and Funds; Scheduling; Time Pressure; Time/Space in Standards; Transitions

Strategy: Transitions

What: Reducing transition time and making transitions as smooth as possible will make taking students outside easier, more manageable and time efficient. To achieve smooth transitions, practice is a must. Deliberate teaching and regular practice of transitions such as: lining up with notebooks or materials for outdoor lessons, putting on outdoor gear, moving to outdoor location, getting students to listen/focus on work/avoid distractions while outside, cleaning up, and transitioning back inside is necessary. In addition, practicing transitions throughout the year to keep them smooth and to remind students of expectations will make them more time efficient.

How: At the beginning of the year, identify what transitions will be required to make it possible for your class to go outside. Consider questions such as:

- Where will students line up? In the classroom, in the hallway?
- Will students line up in regular line order, random order or will they have outdoor buddies that they walk with?
- What materials will students need to bring with them? How long might it take to gather all of these materials?
- Will you have an outdoor kit or canvas bag with supplies for outdoor activities? If so, where will these materials be stored? Who will carry them? Who will restock them?
- Will you put a note on the door to say where you are? Who will be responsible for this?
- Will you have students use the bathroom/get water before leaving? Will they go all at once or will you stagger them and have them go during the lesson prior to going outside?
- If special clothing or gear is required (sun, rain protection), how long will getting ready take? Will any students need to get clothes from the nurse or clothing bank?
- Is there a sign-out system? Do you need to go to the office to sign out? Can a student go ahead of the class and do this?
- Do you need a stop sign to cross a street?
- Do you need to get walkie-talkies from the office?
- Do you need to get a first aid kit from the nurse or can you have a grab and go kit in the classroom?
- Which direction is the fastest way to walk to get to different locations?
- How long does it take your class to get to these locations? Can they improve their time with each practice?
- Where will you go outside? How far from the classroom is the location? Are there multiple locations on the school grounds that you can take your class? Are some faster to get to than others (perhaps consider these closer locations when time is short)?
- How will you tell time/keep time while outside?
- How will you help students focus while outdoors? Will you create opportunities for them to practice ignoring distractions? Listening to a read aloud outdoors? Working on academic work and building stamina while outside?
- What signals will you use with students to get their attention while you are outside?
- How will you clean up? Line up?

Once you have identified which transitions to are needed, figure out clear routines and expectations for each that can be taught to and practice by students.

When: The beginning of the year is a great time to set these routines as the weather is typically nice and the first six weeks of school are spent teaching the routines of the classroom. The more practice students have and the clearer the expectations, the smoother and faster the transitions will be. As the year progresses things may change such as winter gear will need to be put on. Adjust routines and teach

changes as needed, allowing students a chance practice again. Practice does take time, but in the long run efficient transitions will make going outside much easier and faster.

Who: Teachers and assistants will need to identify what transitions will need to be taught and develop clear routines and expectations for each of those transitions. Students will need to be taught the expectations for each transition and have the opportunity to practice.

Why: Time is limited during the school day so quick transitions will make going outside with students less time consuming and potentially more possible. Smooth and clear transitions will make them easier to manage for teachers and less stressful and chaotic for students. If getting outside is easy, teachers will be more likely to plan to go outside and students will be more likely to want to go.

Consider: Are there school-wide transitions or procedures that will play a role in accessing the outdoors? For example, can there be a sign -out near a particular exit door that classes can sign as the leave the building rather than detouring towards the office? Can classes have individual first aid kits to take outdoors (with basics for still being on school grounds)?

Barriers Addressed: Class Management; Clothing; Out of Routine; Time Pressure; Transitions

Strategy: Use campaigns

What: Time or awareness campaigns to encourage spending time outside.

How: Use campaigns can be an effective way to encourage people to take some action.

- **Awareness campaign**- put posters or flyers around the school to remind educators and students about the benefits of spending time outside, and encourage teachers to take classes outside. You can create your own posters, or use existing ones. For example, the Children and Nature Network has several infographics about the benefits of time in nature that are free to download and use!
    - https://www.childrenandnature.org/learn/tools-resources/
- **Time outside campaign**- set up a competition to see which class in a school can spend the most time outside during a set time period. Have students record and report on the number of minutes their class spends outside during that time period, and at the end of the campaign announce the winning class(es). Consider having a kick-off or ending event with outdoor activities to raise awareness of the campaign and benefits of time in nature. Consider setting up a visual tracking system (big poster, bar graph, etc.) in a central location (near the main entrance?) to act as a reminder and encourage some friendly competition between classes. Consider offering a prize to the class that spends the most time outside (Extra outdoor play for a week? Walking field trip to a local park?). This sort of campaign can help encourage educators to take students outside and try or find new opportunities for time outside. It can encourage students to focus and participate during outdoor lessons, so they are able to earn additional outdoor time through good behavior. It can also help turn spending time outside into a habit that becomes part of the class routine, and continues beyond the end of the campaign.

When: Anytime.

Who: Can be organized by teachers, administrators, or staff.

Materials: Posters, flyers, or other awareness materials. Tracking sheet for school-wide time outside competition.

Why: Use campaigns can encourage educators to take students outside through reminders and friendly competition, and help make time outside part of the regular class routine.

Barriers addressed: Educator Awareness; Educator Content Knowledge; Educator Interest/Willingness; Remembering to Include Nature; School Culture; Support from Authority

Workshop Planning Guide

This section provides resources for working with staff in your school or district to support taking students outside. We hope these materials will help facilitate discussion about, planning for, and support of taking students outside at your school. It includes:

- A guide for running a professional development workshop with staff.
- Questions to consider or discuss with colleagues.
- Workshop materials (activities) and PowerPoint slides.

(Section will be completed based on workshops at schools.)

Resources

Existing Curriculum Resources – Existing Nature-Based/Environmental Curricula

- ***Handbook of Nature Study****, Anna Comstock (available for purchase)*
- ***The Nature Connection*** *(great resources available for purchase)*
- ***Schoolyard- Enhanced Learning****: Using the Outdoors as an Instructional Tool, K-8 (available for purchase)*
- **Boston Schoolyard Initiative** *Guides to teaching FOSS science curriculum outdoors and professional development*
- **Green Schools Initiative** *Sustainability Curricula Directory*
- **National Geographic** *Curriculum Resources(nature topics, some lessons can be done inside, some outside)*
    - *Resource Library*
    - Sponsor Content: Why the Outdoors is the World's Greatest Playground
- **National Wildlife Federation** *Lesson Plans and Webinars*
- **Project Wet/Project Wild** *Educators Guides*
- ***Green Schoolyards America and the International School Grounds Alliance*** *Free schoolyard activity guides*
- ***School Garden Project*** *Free standards-linked lessons*

Online Resources for Outdoor School Activities

- **Kid Activities** *35 Fun Outdoor Games for Kids of All Ages*

Online Resources for Outdoor Education

- **North American Association for Environmental Education**

Resources for Mindfulness, Movement

- **Action for Healthy Kids** *Classroom Physical Activity Breaks*
- **Go Noodle** *Short interactive activities for teachers and parents to get kids moving, engaged and motivated* – www.gonoodle.com
- **Green Child Magazine** *Free guided mediation and relaxation scripts for kids* - https://www.greenchildmagazine.com/free-meditation-guided-relaxation-scripts-kids/
- **Kindred Meditations** *Free kid friendly guided meditations and music for children* – www.kindredmutations.com
- **Let's Move** *Resource Guide of activities for children to promote physical activity* - https://wvde.state.wv.us/healthyschools/documents/resource_guide_interactiveFinal.pdf

Resources for Purchase of Supplies

- **Carolina Biological** *Leading supplier of science teaching materials*
- **Oriental Trading** *Party Supplies, Toys, Crafts & More*

Resources for School Gardens

- **Annie's** *How-to Guide for Growing School Gardens*

- **Cornell University College of Agriculture & Life Sciences**
    - *Videos and tutorials of designing gardens* http://gardening.cals.cornell.edu/garden-guidance/design/
    - *Garden-based activities and lessons -* http://gardening.cals.cornell.edu/lessons/
    - *Food Garden - http://gardening.cals.cornell.edu/garden-guidance/foodgarden/*
    - *Long-Term Maintenance - http://gardening.cals.cornell.edu/program-tools/planning-organizing/sustaining-the-garden/*
- **DUG** *School Garden and Nutrition Curriculum*
- **USDA Food and Nutrition Science** *Standards-Based Gardening Nutrition Curriculum for Grades 3 and 4*
- **Garden Grants:**
    - *2020 Budding Botanist Grant*
    - *2020 Youth Garden Grant*
    - *Annie's Grants for Gardens*
- **Healthy Food Choices in Schools** *Maintenance Plan for School Gardens*
- **Kids Gardening** *Starting a School Garden Program Overview*
    - *Container Gardening*

Use Campaigns Resources

- **Children and Nature Network** *Infographics of Benefits of Nature*

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