KaiPod LEARNING

MY OWN MICROSCHOOL

EMBRACING THE GREAT OUTDOORS

A Step-by-Step Guide to Starting a Nature School

WHAT'S INSIDE:

-**Explore** curriculum options to keep students engaged outdoors

-**Brainstorm** activities, themes, and daily schedules

-**Prepare** for anything with gear lists

-**Find** a location and design your outdoor classroom

-**Practice** responding to student interests through emergent curriculum

Why Start a Nature School?

Forest or nature schools have been around in some form or another since the early 1950s in Denmark. The idea has taken off over the years and morphed into a popular alternative school option for many families. Nature schools provide hands-on learning experiences in a natural setting such as a forest, local park, nature preserve, farm, or creek. While traditional schooling happens indoors, nature schools need not conform to our conventional understanding of school. Instead, learning experiences happen outside and are inspired by the natural world.

Benefits of Outdoor Learning

At a time when children are spending more and more time in structured environments and overscheduled after school, on weekends, and during the summer, the value of time spent in nature cannot be overstated. Research suggests that children are calmer outdoors. The environment encourages them to use their imaginations and creates a healthy respect for and understanding of animals, plants, and the world. The more time children spend out of doors, the more they are able to focus and learn new things.

Why Do You Want to Start a Nature School?

Begin by defining your vision. What about outdoor learning or the nature school classroom appeals to you? Consider your own experiences in nature. What do you like about being outdoors? Before you imagine your nature-focused Microschool, take a moment to write down some notes about your vision.

Use the prompts below to jumpstart your thinking.

What part of the outdoors inspires you the most? (e.g., learning about plants and animals, seeing interesting views, exploring)

What aspects of the natural world are the most important to highlight for your students?

When you envision your school, what do you see?

Will your school be fully outdoors or partially outdoors? How did you come to this decision?

What is the most essential part of a nature school to you? (e.g., immersed in nature, freedom of curriculum, learning about the natural world)

What type of program will your school offer? (e.g., full-time, part-time, supplement to homeschool/traditional school)

What other ideas do you have about your nature school?

Choosing a Curriculum

Nature schools offer various curriculum models; there isn't a one-size-fits-all. Think about your program and what might work best for you. Here are some common types of curriculum offered by nature schools:

Place-Based Curriculum

This type of curriculum is focused on learning that is deeply rooted in the local history, environment, and community. It often utilizes community engagement and supports a deep understanding of and respect for the local area and natural habitats.

- Age Group: K–12
- Type of Learner: Local community–oriented, environmental learners

Reggio Emilia Approach

This approach originated in the Reggio Emilia region of Italy after World War II. It relies on the idea that children are strong and powerful learners who should have a say in their own learning journey. Reggio Emilia encourages hands-on, child-led instruction and observational teaching (taking notes, documenting students' questions, and learning to inform instruction) with the teacher as a collaborator.

- Age Group: Early childhood (ideal for 0–6 years)
- Type of Learner: Hands-on, creative, collaborative learners

Project-Based Learning

Project-based learning, often referred to as PBL, is an educational approach that encourages students to explore real-world issues through in-depth projects. Learning is integrated across subject areas and supports the development of critical thinking, collaboration, and creativity skills. In this method, teachers act as learning facilitators and guide students in inquiry, research, and problem-solving instruction to support their understanding and deep knowledge of a topic.

- Age Group: Upper elementary to high school (ages 8–18)
- Type of Learner: Critical thinkers, problem solvers, collaborative learners

Outdoor Education

This type of curriculum integrates the idea of outdoor adventures such as hiking, rock climbing, kayaking, sailing, camping, and wilderness survival (e.g., building shelters, starting fires, identifying edible plants) with life skills such as communication, problem-solving and teamwork. Students develop a deep respect for the natural world through an emphasis on environmental stewardship.

- Age Group: Middle school to high school (ages 11–18)
- Type of Learner: Adventurous, nature-oriented, experiential learners

Permaculture Education

This approach teaches students the principles of permaculture design (e.g., sustainable agriculture, community building, ecological design) along with a hands-on curriculum that teaches students about sustainable living.

- Age Group: All ages, especially effective in middle school to adult education
- Type of Learner: Environmentally conscious, sustainable living learners

Waldorf

Waldorf education is a holistic educational method that was originally developed by Rudolph Steiner and focuses on the development of the whole child using art and experiential activities. In early childhood, the focus is on imaginative play and imitation. In middle childhood, students shift their focus to storytelling and artistic expression, while adolescence focuses on critical thinking and self-discovery.

- Age Group: Early childhood to high school (ages 0-18)
- Type of Learner: Artistic, imaginative, holistic development learners

Montessori

Dr. Maria Montessori, an Italian physician, developed this educational approach over a century ago. Montessori classrooms are child-focused and provide students with real-world tasks and skills that foster self-motivation, engagement, and independence. Students work independently and in groups at their own pace depending on their individual needs.

- Age Group: Early childhood to elementary school (ages 0-10)
- Type of Learner: Self-motivated, independent, hands-on learners

What curriculum makes the most sense for your Microschool? Why?

Activities

Being outdoors offers endless learning opportunities. From observing the habits and habitats of animals in real time to identifying patterns in nature, the opportunities abound! Here is a list of ideas to get you started.

Art

- Painting rocks
- Creating Andy Warhol–inspired nature art
- Using plants to make paint
- Using acorns to make nature necklaces
- Creating leaf suncatchers
- Pressing leaves and flowers to make cards, bookmarks, or other nature art

English Language Arts

- Recording daily nature observations in a nature journal to reflect on their surroundings
- Writing list poems to describe a tree or plant
- Creating the letters of the alphabet using natural objects
- Reenacting stories that have been read aloud on a nature stage

Science

- Making replicas of animal habitats from the perspective of different animals (e.g., an ant, a rabbit, a fox)
- Collecting specimens and observing them under a magnifying glass or microscope
- Conducting experiments to determine how different-sized objects (e.g., acorns) float or sink differently
- Creating a wildlife inventory to understand who lives in the area
- Learning about decomposition using leaves and plants

Math

- Measuring the height or width of trees using different methods and tools
- Using natural objects (pebbles, acorns, sticks, etc.) to represent numbers when solving equations
- Identifying patterns in nature and recording them in a field journal
- Learning about graphing by collecting and recording the different types of leaves or flowers found in a specific area
- Classifying natural objects based on attributes (e.g., color, shape, size)

Outdoor Skills

- Shelter building
- Fire building
- Orienteering
- Climbing trees and balancing on logs or stumps

What type of activities appeal to you? Use the space below to record some ideas that you are interested in using for your nature school.

Themes

While your school will likely have a consistent daily rhythm, keep it dynamic by using weekly, monthly, or quarterly themes based on seasons, topic areas, or students' interests.

Some ideas include:

- Animals and Habitats: Learn about animals local to the area, their specific habitats, behaviors, and needs
- The Wonders of Weather: Learn about weather patterns, observe and record weather, and learn about major weather events and their effects on nature.
- Plants and Pollinators: Focus on the unique plants in your region and the pollinators they need.
- Butterflies: Focus on one type of creature in detail. What are the different kinds of butterflies? What does a butterfly need? How do butterflies live?

What kinds of themes could you envision for your nature school?

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Schedule

Now that you have begun to think about your curriculum, let's think about the flow of your day. Each day will have its particular focus, depending on the weather and your students' interests. A regular rhythm will support you in planning and creating a container for student learning and experiences.

Here is a sample schedule for a full-time, completely outdoor nature school program designed for K-3. This type of overview schedule can be shared with families and other teachers to orient them to the flow of the class while also allowing teachers to adjust the schedule to meet the emerging needs of students.

9:00 – 9:15 AM: Arrival and Welcome Circle

- Morning circle that incorporates a movement, a morning greeting, and daily news, orienting the class to the day's plan.

9:15 – 10:00 AM: Nature Exploration and Discovery

- Guided nature walks, exploration, or observations (e.g., nature journaling)

10:00 – 10:30 AM: Snack Time

- Healthy snacks and unstructured play time in designated areas

10:30 – 11:15 AM: Learning Station Rotations

- Weekly learning stations focused on different areas of instruction and hands-on learning activities

11:15 – 12:00 PM: Focused Instructional Time

- A structured lesson that integrates nature with core subjects (e.g., math: counting and sorting natural objects; science: identifying insect body parts and then going on an insect hunt to observe insects in their habitat)

12:00 – 12:45 PM: Lunch and Free Play

- Outdoor picnic-style lunch and unstructured play time in designated areas

12:45 – 1:15 PM: Quiet Time/Story Time

- A calm time for rest, reading, or quiet activities (e.g., yoga, meditation, nature journaling)

1:15 – 1:45 PM: Focused Instructional Time

- A structured lesson that integrates nature with core subjects

1:45 – 2:00 PM: Closing Circle and Reflection

2:00 PM: Dismissal

Think about the flow of your ideal day for your program. How would you structure your time? Fill out this schedule template with your ideas:

Time	Activity	Notes

What You'll Need

When starting your own school, an important thing to remember is what specific resources or materials you'll need. Depending on your program, you might consider the following:

Equipment

- ☐ Outdoor shelter
  - ☐ Consider your need for protection from sun, rain, snow, or other natural elements (e.g., tents, tarps, portable shelters)
- ☐ Seating/Tables
  - ☐ Where will students sit for meals, projects, or work time? (e.g., picnic tables, logs, stumps, portable chairs/tables)
- ☐ Safety and First Aid
  - ☐ Well-stocked first aid supplies, sunscreen, bug repellent, hand sanitizer, soap/water station for handwashing, a place to keep emergency information and medical forms for students, etc.
  - ☐ Communication supplies (e.g., extra cell, walkie-talkies, whistles)
- ☐ Clothing and Personal Gear
  - ☐ Extra weather-specific clothing and footwear for students (or gear for all students if the school is providing this)
  - ☐ Backpacks/bags for students to carry items away from the base camp for nature hikes, exploration, etc.

Learning Tools

- ☐ Teaching tools
  - ☐ Curriculum guides, read-aloud texts that are specific to instructional themes, models (e.g., plants/animals)
- ☐ Navigation
  - ☐ Compass, maps of the area
- ☐ Observation tools
  - ☐ Binoculars
  - ☐ Magnifying glasses
  - ☐ Microscopes
  - ☐ Field guides (birds, plants, animals specific to your area)
  - ☐ Clipboards, notebooks, writing materials
- ☐ Collecting tools
  - ☐ Nets (pond collecting, insect catching)
  - ☐ Buckets and small containers for collecting natural items
- ☐ Art Supplies
  - ☐ Paints, brushes, cups for water
  - ☐ Clay
  - ☐ Paper and fabric for printing projects
- ☐ Gardening (if the space is private/available)
  - ☐ Watering cans
  - ☐ Seeds, plants
  - ☐ Composting bins

Recreational Equipment

- ☐ Ropes or gear for fort building (small tarps, fabric)
- ☐ Balls, hula hoops, misc. Sports equipment
- ☐ Child-size tools (e.g., saws, hammers, nails for supervised building activities)

Miscellaneous

- ☐ Storage bins for keeping materials organized, dry, and clean
- ☐ Wagon, cart, or wheelbarrow for hauling equipment
- ☐ Container for keeping student lunches and snacks clean, dry, and safe from animals
- ☐ Trash, compost, recycling bags or containers
- ☐ Portable camp stove and fuel (for hot drinks, school cooking projects, snacks)
- ☐ Portable toilet with privacy shield (or access to public facilities that are safe and clean for student use)

What would you add? Fill in the list below:

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Sample Gear List

Ensure that students and families are set up for success by providing them with a detailed list of recommended clothing and outdoor gear needed for students each season. Here is a sample gear list to provide to families.

"There's no such thing as bad weather, only unsuitable clothing" –Alfred Wainwright

Each day, students should have the following:

- ☐ A change of clothing that is seasonally appropriate (including underwear and socks) in a Ziploc bag labeled with their name
- ☐ A backpack that fits lunch, snack, water bottle, and change of clothing
- ☐ One reusable water bottle (please decide how large based on your individual child's needs)
- ☐ Lunch and snacks (please use reusable storage containers)
- ☐ Sunscreen and insect repellent

Gear at a Glance

- ☐ Waterproof outer layer (either two-piece top and bottom layer or full suit such as Oaki)
- ☐ The outer layer (goes under rain/waterproof layer, e.g., fleece)
- ☐ Base layer (non-cotton, e.g., lightweight thermals or wool top and bottom)
- ☐ Socks (non-cotton, wool is best)
- ☐ Boots (winter/fall) or closed-toe shoes (spring/summer/fall) that can withstand mud and water
- ☐ Warm hat and gloves (please include extras)
- ☐ Sun hat (spring/summer/fall)

Identify a Location for Your Nature School

Finding a space that works for your nature school can be the most challenging element in your planning! Consider the following location ideas and then add your ideas in the spaces provided:

Parks

- Working with or running a school at a local park or forest can have many advantages, including established shelters, clean and accessible restrooms, and even staff or curricular resources.

Arboretums or Botanical Gardens

- Partner with an existing organization that manages your local arboretum or botanical garden. Staff are often delighted to partner with nature schools and might provide a wealth of knowledge and resources for your students. Additionally, these spaces are often free and open for public use.

Local Community Spaces

- Many houses of worship, private schools, community gardens, and local farms have multi-use spaces that they will allow other organizations or schools to use at a discount or for free

Summer camps

- Are there local residential summer camps in your area that aren't being used in the off-season? How might you partner with them to share an existing space already set up for groups of students?

Personal Homes/Yards/Gardens

- Some small programs choose to use an existing space in the director or teacher's yard that has been carefully created to make an appealing outdoor space for students (this is especially popular for small in-home programs that are partially outdoors)

- _____
- _____
- _____
- _____

Design Your Outdoor Classroom

What kind of outdoor learning space will your nature school use? Many programs categorize their learning spaces into three distinct zones: covered shelters (picnic tables, covered area for inclement weather, designated lunch space, etc), open-ended play spaces (zoned areas for free play including climbing trees, fields, creeks or streams), and wilderness area (hiking trails, forested area, woods). While some elements of your outdoor classroom might remain untouched, your students might also want to create forts or shelters, nature art, or other nature-inspired creations. As you think about your space, consider how you will engage with nature and the area you use in a sustainable way.

When deciding what kind of space your school will need, consider the following prompts to get you started:

Who else will be using this space at the same time as the school? (e.g., public, other programs, property owner, or community members)

Are there designated spaces set aside for the school?

If so, what do these spaces contain? What will they need?

What types of activities will students most often engage in? (e.g., hiking, exploring, nature journaling, observational activities)

Now that you've considered what your students will need in their space, answer the following questions to help you visualize your outdoor classroom.

Where will students be picked up/dropped off?

Where will students eat lunch/snacks?

What are the three most important elements in your nature classroom?

1.

2.

3.

Sketch a picture of how you will organize your nature classroom below.

Determine Your Inclement Weather Policy

An important element of nature school is the weather and how best to create a positive learning environment for students across many different types of weather patterns. Nature schools need to determine their threshold for when to cancel outdoor learning experiences and what to do instead.

Some schools choose to follow the local public schools: if the public schools close due to snow, storms, or other extreme weather, they will also close for the same amount of time. Other schools provide families with a forecast each week, and if the temperatures go above or below a specific number, they will cancel the program for the following day.

Read and use the following prompts to help you create your own inclement weather policy.

What will your threshold be for deciding when to cancel school or hold classes indoors?

Will you have an indoor learning space available in the case of inclement weather?

If so, will it be equipped with materials, or will it need to be set up on the day of use?

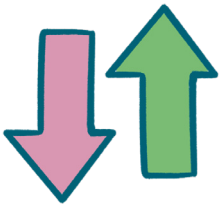
What types of lessons translate better to an indoor environment? (e.g., storytelling, writing, project-based activities that don't need to be outdoors to be successful)

Connecting with Students

The Urge to Play

Young children are hard-wired to play. This is the way that they engage and make sense of the world. In order to better understand your students, you can think about play from a child development lens. Child play schemas are repeated patterns of behavior that children engage in to better understand the world. As you begin to plan your curriculum and learning experiences for students, reflect on how you can use play schemas to inform your instruction.

PLAY URGES IN CHILDREN

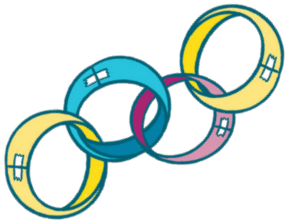


ORIENTATION

Children explore different perspectives (e.g., turning objects upside down or looking through objects). This type of play supports building an understanding of perspective and orientation of the world.

POSITIONING

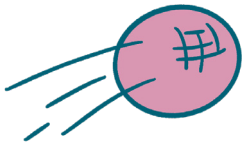
Children arrange objects in specific patterns or orders (e.g., lining up toy cars, organizing things in a row, or creating designs with symmetry). This type of play supports pattern recognition and organizational skill building.



CONNECTION

Children join different objects together (e.g., using construction toys to create something new, linking trains, or using materials to tie objects together). This type of play supports building an understanding of the relationship between objects and also the development of fine motor skills.

TRAJECTORY



Children engage in activities that involve movement through the air (e.g., throwing balls, dropping rocks, or swinging objects). This type of play supports an understanding of gravity, direction, and speed.

CONTAINING

Children place objects within containers or other similar objects (e.g., stacking cups of varying sizes and filling containers). This type of play helps children build an understanding of spatial relationships, volume, and containment.

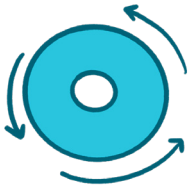
TRANSPORTING

Children move objects from one place to another (e.g., carrying rocks from a stream to a stump). This type of play supports the development of concepts such as volume, weight, measurement, and quantity.

ENVELOPING

Children create or move boundaries around objects or themselves (e.g., covering things with fabric, building fences, placing items inside a box or other structure). This type of play supports an understanding of inside/outside and spatial awareness.

ROTATION



Children spin or rotate objects or themselves (e.g., spinning in circles, turning wheels). This type of play supports the development of circular motion and centrifugal force.

TRANSFORMING

Children combine or change the state of materials or objects (e.g., mixing colors, melting ice, combining liquids). This type of play encourages experimentation and an understanding of cause and effect.

Responding to Student Interests

Emergent Curriculum

In most traditional schools, the district, school, or classroom teacher sets the curriculum and daily schedule in advance. The focus of the curriculum and instruction is based on meeting state standards and excelling on standardized tests. The needs of individual students are not taken into consideration.

What would happen if students were taught using a curriculum that focused on each class's emerging ideas and interests?

An emergent curriculum is an educational approach that focuses on and builds on the ideas and interests of children. This method of instruction can be attributed to the Reggio Emilia educational model. The emergent curriculum has been used with many different educational approaches and emphasizes the power of creating a curriculum based on children's unique experiences and interests.

In our busy day-to-day culture, children are often rushed from one structured activity to the next and never given the opportunity to pause, notice the world around them, and engage in authentic learning experiences with the natural world. Children need nature. They are innately driven to ask questions and use their curiosity to learn about the world. The nature school provides children with the opportunity to slow down and develop a sense of respect and understanding for the world around them.

Key characteristics of an emergent curriculum include:

1. **Flexibility.** Curriculum planning is flexible and allows for time and space for spontaneous discoveries and the ability to adapt the plan to meet the needs and interests of the group.
2. **Child-centered curriculum.** The curriculum begins with students' questions and interests, making learning experiences and activities relevant and engaging.
3. **Collaboration.** Children, teachers, and parents are encouraged to collaborate to develop learning activities that connect with children's interests. Children are supported to work together in small groups to learn and share knowledge.
4. **Integrated learning across subjects.** Curricular subjects are not taught in isolation but rather integrated into cross-curricular projects with an emphasis on real-world skills and knowledge.
5. **Documentation and reflection.** There is an ongoing documentation of children's work and learning experiences. Documentation can include written notes, work samples, photos of students engaging in learning, and/or audio or visual recordings. Teachers and students use ongoing reflection to determine future learning goals and experiences.

6. **Environment as a teacher.** The learning environment is designed to invite curiosity and learning exploration.
7. **Teacher as a learning facilitator.** Teachers facilitate student experiences instead of directing them by allowing students to solve problems, ask questions, and investigate concepts.

How might you respond to student interests when creating learning experiences for your students? Consider the following scenarios and record your ideas for creating an emergent curriculum or learning opportunity.

You notice a group of 5-6-year-olds are fascinated by the different colors in leaves.

Several students spend time each day throwing rocks of varying sizes in the stream.

Students in a third-grade class are fascinated by shelter and fort building. For the past week, they have been designing and rebuilding the same structure.

Several children in a mixed age (7-9 years old) class have been collecting different objects (sticks, rocks, pinecones) and pretending they are treasures.

Enjoy this resource?

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