Transformation a play environment doesn’t require endless resources. With a few easy-to-find materials and willing volunteers, many settings and elements can be made at minimal cost, providing affordable opportunities for learning and play. This InfoSheet provides examples of creative and cost-effective ways to naturalize your outdoor learning environment (OLE).

**SUNFLOWER PLAYHOUSE, MAZE, OR PATH**

*Materials: sunflower seeds, garden soil, sunlight*

Sunflowers are easy to grow— they just need water and sunlight! It's always best to prepare the planting beds first, mixing in some compost or good soil if existing soil is compacted. Try different sunflower varieties to see how they grow and compare them with the kids. After the sunflowers have bloomed, use them for flower arrangements, or let the flowers dry out and hang down on the stalks for birds to enjoy as a food source.

**LOG SEAT GATHERING PLACE**

*Materials: Sliced segments of logs (8-18 in. thick)*

Logs can usually be found in communities for free—talk to tree removal companies to reserve tree segments before they grind them. Logs and stumps don’t have the same life span as a stone circle, and will need replacing every five years or so. Red cedar, oak, maple and other hardwoods provide the longest lasting stumps. Make sure the edges of stumps are smooth, using sand paper if necessary. Logs can also serve as a temporary boundary for earth and sand play settings.

**BOULDER/STONE GATHERING PLACE**

*Materials: Rounded boulders or smaller stones*

If located in a rocky region, rounded stones may be easy to find. If not, they may add some cost to project installation. They last forever and have many uses, including seating, climbing, loose parts, and path edging. Be sure to choose smooth, rounded materials. Sharp edges and rough textures will make sitting stones hazardous for children.
TIRE PLANTERS
Materials: Tires, soil, non-edible plants, non-toxic paint, primer

Old tires can be used to create instant planting beds, path buffers, or border plantings. Tires can be found inexpensively at almost any local car repair shop or tire store. If stacking more than one tire, fasten them together so they don’t slide apart, using bolts to connect adjoining tire walls. You can prime and paint your tires with outdoor, nontoxic paint to enliven your outdoor learning environment. Choose light colors to minimize heat absorption and high temperatures!

Note: Never use edible plants in tire planters. As tires degrade over time, the plants may absorb chemicals from the rubber and become toxic.

VINE TEEPEE
Materials: Bamboo segments, zip-ties, vines

A vine teepee can serve as an instant playhouse, secret spot, or vegetable trellis. People with “escaped bamboo” in their yards may be thrilled to have people cut some down for a play structure. Ask around your community, and be sure to get permission before you cut. The sturdier the bamboo, the better. Even the hardiest bamboo will need replacing after three or four years. Many kinds of climbing vines work well on teepees: edible peas or beans, annual flowers, and perennial vines will all thrive.

LOG BENCHES
Materials: Sliced Log Segments, sandpaper

Log benches require a moderate amount of skill and tools to build and keep stable. Look for skilled volunteers and community support for your log bench project. Talk to tree removal companies to reserve tree segments before they grind them. Logs can often be found in your community for free. Red cedar and hardwoods provide the longest lasting logs. Sand the edges smooth if necessary.

TREE COOKIES
Materials: Sliced segments of logs (3-6” thick)

Look around the community for sources of free logs to slice up into tree cookies. Tree cookies can be used for a fun, temporary pathway if stepping stones are not initially affordable. Tree cookie lifespans are short, so they will need replacing every two or three years. Hardwoods last longer than soft woods. Red cedar is ideal due to its resistance to decay and the cookies have fun shapes.
NATURAL CONSTRUCTION PLAY AREA
*Materials: Assorted safe and natural building elements*

All you need are materials— the kids do the rest! Materials may include bamboo poles, bark wedges, straw bales, small stones, log stumps, tree cookies, trimmed branches, pine cones, large leaves, ropes, burlap, cardboard boxes, and other readily available materials. Locate the natural construction area near a structure to build against, such as a wall or a grove of trees. Sticks shouldn’t be more than 3 feet long to prevent injury. All materials should be frequently inspected to ensure there are no sharp edges.

NATURAL PLAYHOUSE
*Materials: Sturdy logs, branches, zip-ties/rope*

Collaborate with tree removal or landscape companies/crews to receive prunings, tree branches, and stumps before they grind them. The natural playhouses shown here required a moderate amount of skill and a few hand tools to assemble. The lifespan of a natural playhouse is between three to five years, unless a sturdy timber frame is used to provide structure to the natural materials. Consider rebuilding the playhouse every few years as a fun learning project. Use fresh-cut branches rather than old branches from the forest floor.

RAISED BEDS
*Materials: Boards or logs, good soil, time and effort*

Raised beds can be anywhere from 6 to 30 inches tall. There is a wealth of information available online on how to construct your own, and ready-made kits can be easily purchased. Railroad ties are not recommended for edible beds, as they may contain too many leaching chemicals. If using pressure treated lumber, add an impervious liner between the boards and the soil to prevent leaching. If you want to improve the soil, check local municipal yard waste centers— usually they’ll give away or sell leaf mulch compost from street collection.

WILDFLOWER PATCH
*Materials: Wildflower seeds, garden soil, full sun*

Packet seeds of wildflower seeds are easy to find at any local garden center with mixes appropriate for your climate. Use the wildflower patch to replace grass or bare earth, but be sure to remove the grass before seeding. Prepare the beds by first mixing in some compost or good soil. Buy a few different mixes, follow the instructions on the seed packets, and see what comes up!
TERRACED GARDEN BEDS
*Materials: Wood, sloped earth, amended soil*

When planning an outdoor vegetable garden, you may initially think that uneven terrain will prevent you from planting. Terraced garden beds provide a flexible solution to otherwise difficult planting conditions. Boards or timber can be found at local home improvement centers. If using pressure treated lumber, add an impervious liner between the wood and the soil to prevent leaching. Terraces require a moderate amount of skill and effort to build—solicit help from skilled volunteers in your community.

PULL-UP BARS
*Materials: Log segments, bamboo/PVC pipe, drill*

Pull-up bars require a moderate amount of skill and tools to install. Drill a hole (using a hole saw bit) in the side of each log so the bamboo or pipe can slide in. Bury the log 12–18 inches to make it stable. Dig a hole 4 inches wider than the log and tamp sand in the hole around the log to maximize stability. For a long lasting pull-up bar, use red cedar or other hardwood.

PLANT PROTECTION BOUNDARY
*Materials: bamboo, log segments, ropes, or any other material that creates a protective barrier*

There are many ways to protect plantings from little trampling feet. Regardless of chosen material, ensure that plant protection barriers are between 15–18 inches high to redirect the flow of traffic. Prefabricated, low fencing purchased from a home improvement store can be used, or get creative with readily-available materials. Proper protection will nurture healthy and happy plant growth and increase the chance of successful plant establishment. Remember that OLE plants are an investment worth protecting!

Disclaimer: The Natural Learning Initiative (NLI), NC State University, its partners, and supporting entities assume no responsibility for consequences arising from physical interventions using information contained in this InfoSheet. Under no circumstances will liability be assumed for any loss or damage, including without limitation, indirect or consequential, incurred during installation, management, and use of such interventions. Highly recommended is adherence to relevant local, state, and national regulatory requirements concerning but not limited to health and safety, accessibility, licensing, and program regulation.