



Nature Play Kit



ASTC Association of Science and Technology Centers

About the Nature Play Kit

This kit includes ideas for engaging young learners (0-7) and their families in play-based activities related to nature, climate, and planetary health. It features activities designed, tested, and implemented by members of the LEGO® Playful Learning Museum Network.

These nature-based activities are inspired by the five characteristics of learning through play:

- Joyful
- Socially interactive
- Actively engaging
- Meaningful
- Iterative



Play is the way that young children learn about—and learn to love—nature.



“When young children have a foundation of positive nature experiences that support their mental and physical health, they are more likely to become engaged environmental stewards as they grow older.”

[Caretakers of Wonder](#)

Tips for Nature Play with Young Learners

- **Focus locally** on places, materials, and topics that children see and experience in the world around them
- **Find nature everywhere.** You don't need a pristine wilderness area to experience nature. Nature play can happen in a park, a parking lot, or even indoors using natural materials.
- **Encourage empathy** by creating opportunities for children to imagine the needs of living things and their habitats.



- **Prioritize sensory engagement over information.** Young children learn best with their bodies. Invite hands-on engagement requiring minimal verbal instruction or explanation.
- **Keep it short and simple,** remembering that early learner attention spans may be limited.
- **Consider the caregivers** and provide ways they can support the activity and engage with their child.

Image credit
Top: Boston Children's Museum
Bottom: Chicago Children's Museum

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Sensory Nature Exploration

Touch and investigate natural materials

With a collection of tactile objects, children can feel and compare natural items to inspire curiosity about the natural world around them

This calm and open-ended activity encourages positive interactions between children and their caregivers

Suggested materials

Put together a collection of familiar and unfamiliar objects from nature. Consider themes like:

- Seasonal – gourds, dry leaves, shed antlers, and dry mushrooms for fall
- Local – shells, sand, and dry seaweed for a coastal setting
- Compare and contrast – a collection of rocks with varied colors, textures, and weights

Additional resources

[Nature Play Exploration](#) (Chicago Children's Museum)



Image credit: Boston Children's Museum

Create a Habitat

Can you build a home for an animal?

In this activity, children think about the unique characteristics and needs of an animal to create a habitat. Foster empathy with questions like, “What do you need in **your** home?” and, “What do you think this animal might need in **its** home?” This activity can be adapted to feature any type of habitat, from the ocean to the desert!

Suggested materials

- Animal figurines – consider local species
- Natural materials like soil, sticks, leaves, rocks – consider collecting these (or having children help collect them) locally

Additional resources

[Habitat Sort One Sheet](#)

(Museum of Discovery and Science)



Image credit:
Museum of Discovery & Science



Image credit:
Boston Children's Museum

Habitat Clean Up Challenge

Design a tool that can help remove trash from an animal's home!

This hands-on challenge promotes problem solving and empathy, connected to the local environment. The example here focuses on a harbor, but can be adapted to suit any habitat.

Suggested materials

- Start with a habitat - To represent a harbor, use a shallow basin with water, like a kiddie pool. Add real or model plants, rocks, and animals.
- Add trash - Sanitize and repurpose objects like cups, bags, bottles, and cans
- Provide tools - Offer dowels, tongs, scoops, sieves, magnets, etc., along with clips, rubber bands, and similar supplies for combining them.

Additional resources

[Habitat Clean-Up Guide](#)

[Habitat Clean-Up One Sheet](#)

(Boston Children's Museum)



Image credit:
Boston Children's Museum

Hue & Seek

What colors can you find in nature?

This activity fosters appreciation of the natural world while supporting skills like sorting and classification. It can be done outside, or inside using natural materials.

Invite children to find different colors in nature. They may be surprised to discover vibrant and varied hues, beyond the expected shades of brown and green!

Suggested materials

- Color samples. Try paint swatches, crayons, or colored paper.
- A wide variety of natural materials.
- Baskets or bins for sorting



Image credit: Museum of Discovery & Science

Nature Journaling

Slow down and look carefully. What do you notice?

Nature journaling is a great way for children to follow their curiosity and hone their powers of observation. “Nature” is more than pristine wilderness and this activity can be done in a playground, on a trail, in a parking lot, or indoors using gathered natural materials.

Invite children to pick a specific object or detail from nature and record their observations using words and/or pictures. Try prompts like, What do you notice? What do you wonder? and What does it remind you of?

Suggested materials

- Paper (see linked guide below for instructions on how to fold a mini-book)
- Writing and drawing materials. Try pencils, crayons, watercolors.
- Optional: magnifying glasses, clip boards

Additional resources

[Nature Journaling Guide](#) (Arizona Science Center)

[Nature Journaling Activities](#) (Natural History Museum of Los Angeles County)



Leaf Prints, Three Ways

Use the shapes of nature to create unique art.

Collect leaves in a wide variety of sizes, shapes, and textures. (Children can help collect them!) This playful activity invites creativity and appreciation for the diversity of nature.



Sun prints

Lay the leaf on a piece of dark colored construction paper or cyanotype paper. (For best results, place a clear piece of plastic on top to keep it flat). Leave it in the sun for about 2 hours. Remove the leaf to reveal the print.



Crayon rubbings

Place the leaf on a flat surface. Lay a thin piece of paper on top. Holding a crayon sideways, rub the paper above the leaf, revealing its unique texture.



Ink prints

Using a paint roller, roll a thin layer of washable ink onto one side of the leaf. Keeping the leaf ink-side-up, lay a thin piece of paper on top. Press down. Then, gently peel the paper and leaf apart to reveal the print.

Additional resources

[Sun Prints Guide](#) (Boston Children's Museum)



Building Healthy Cities

Imagine, create, and share ideas for a healthy community

Cities are part of nature, too! Human communities need fresh air, clean water, shade, and more. Well-designed cities protect natural resources and allow humans and other living things to thrive. Adapt these scaffolded prompts, inviting children to imagine, build, and share their visions of a healthy community, using LEGO® bricks or other tools.



Awareness

Build something you might see in your community

- A tree
- An animal
- A way to get around



Empathy

Build something for someone in your community

- A treehouse for kids
- A hideout for wild animals
- A bus stop for your grandparents



Agency

Build something that makes your community better

- A playground that encourages kids to play together
- A way for wild animals to safely cross busy highways



Image credit:
Children's Creativity Museum

Additional resources

[Build the Change](#) (Children's Creativity Museum)

More Resources



Image credit: Museum of Discovery & Science

Explore LEGO® Build the Change resources

Build the Change is a global initiative developed by the LEGO® Group empowering children to express their ideas for a better, more sustainable future through play.
lego.com/en-us/sustainability/children/build-the-change

Learn more about nature-based learning with young children

Climate Action Playbook: Supporting Young Children in a Warming World by Caretakers of Wonder

Discover more about learning through play

Access a growing collection of resources from the LEGO Playful Learning Museum Network.

astc.org/playful-learning

The LEGO® Playful Learning Museum Network

Thank you to the members of the LEGO Playful Learning Museum Network, Build the Change Theme Team, who contributed ideas and insights to this collection.



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