



SERIES 2 · PLAY, WONDER, AND LEARNING

Everyday Treasures, Endless Possibilities

How familiar, carefully screened materials can support open-ended creativity, observation, experimentation, and revision.

CONNECTED CAREGIVER

Series 2 - Play, Wonder, and Learning | 20-22 minutes

ABOUT THIS PUBLICATION

Resources for Caregivers publications provide general educational and informational material informed by research, professional literature, and caregiving practice. Every child, caregiver, family, and situation is different. The ideas are intended to support awareness, reflection, learning, and informed decision-making; they are not a substitute for individualized medical, developmental, mental-health, educational, therapeutic, legal, financial, or other professional advice.

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AT A GLANCE

Estimated reading time: 20-22 minutes

Central idea: Creativity can begin when children notice new possibilities in familiar materials. Adults support that process by choosing safe resources, making room for different kinds of imagination, and protecting time for observation, experimentation, and revision.

In this publication, you will explore how to:

- 1 Build a safe collection of open-ended materials.
- 2 Invite wonder without requiring one “right” creation.
- 3 Support children who prefer either open-ended or more structured play.
- 4 Observe nature for ideas while respecting wildlife, habitats, and local rules.

This publication includes small actions and questions for reflection.

LOOSE-PARTS AND NATURE-SAFETY NOTE

Recycled and natural objects were not necessarily designed or tested as children's products. An adult should select, inspect, clean, and supervise every material according to the child's age, development, abilities, allergies, and likelihood of mouthing objects. Do not offer small parts to children under three or to any child who may swallow them. Exclude batteries, magnets, rubber bands, long strings, plastic bags or film, sharp or splintered pieces, glass, metal cans, staples, unknown

plants or mushrooms, animal remains or droppings, and containers that held chemicals, medicine, alcohol, raw animal foods, or allergens unsafe for the child. Use only child-appropriate, labeled art materials. Nature collection must follow local law and site rules; take nothing from protected places or living habitats. In the United States, possession of feathers from most native birds is prohibited without authorization - even when a feather was naturally shed - so observe or photograph feathers rather than collecting them.

Notice Possibility in Ordinary Things

Children often see possibility where adults see an object with one familiar use.

A cardboard tube might become a telescope. A large box might suggest a bus, shop, stage, or spaceship. A smooth, palm-sized stone might represent treasure in a supervised story. A fabric square might become a cape for a toy or a picnic blanket for imaginary animals.

Imagination does not depend on a constant supply of new toys. It can grow when children have time, safety, permission, and materials flexible enough to support more than one idea.

When children transform ordinary objects, they may practice:

- imagining alternatives;

- planning and revising;
- combining shape, texture, and balance;
- communicating an idea;
- solving practical and pretend problems;
- collaborating or negotiating; and
- deciding when a creation is complete - or when it should become something else.

The lesson is not that every leftover belongs in a craft bin. It is that some carefully chosen materials can invite a second look.

Big Idea: Creativity Begins with Noticing

Creativity does not always begin with having more. Often, it begins with noticing more.

Children may see a possibility adults would not have proposed. When adults pause before demonstrating, they make space for the child's idea to appear.

That does not mean adults must never teach a technique or offer a model. It means the adult can first ask:

- Is the child already exploring an idea?
- Would a question help, or would quiet observation be better?
- Is the child asking for instruction?

- Could I offer one tool or choice without taking over the design?
- What safety boundary needs to remain firm?

Wonder is one pathway into creativity. Instruction, imitation, repetition, cultural tradition, collaboration, and deep familiarity can be pathways too.

The aim is not to protect one idealized kind of creative child. It is to help this child find workable ways to imagine and make.

Choose Materials with Care

Start small. A safe creative collection might include a few adult-inspected items such as:

- sturdy cardboard tubes too wide for the child to swallow;
- clean, dry boxes with staples, plastic windows, cords, and sharp edges removed;
- large pieces of plain cardboard;
- substantial fabric squares with finished edges and no loose threads;
- large paper scraps;
- child-safe crayons, tape, or other labeled materials used as directed;
- large, smooth natural objects that are legal to collect and too large to swallow; or

- photographs and drawings of natural objects that should remain outdoors.

“Large” depends on the child, not only chronological age. If a child mouths objects, has swallowing risks, throws materials, or plays near a younger sibling, choose accordingly.

Inspect before every session. Cardboard can become soggy or sharp. Fabric can fray. Natural objects can crack, splinter, grow mold, carry residue, or hide insects. Recycled items may retain food, chemical, or allergen contamination.

Discard or recycle any item that cannot be cleaned appropriately, has an unknown history, smells unusual, is deteriorating, or introduces a hazard. A free material is not valuable if it is unsafe.

BEGIN WITH A TRAY, NOT A WAREHOUSE

Offer three to five compatible materials in a shallow, stable tray or on a clear floor mat. Keep the rest out of reach.

A small selection makes inspection easier and may help children see relationships among the pieces without becoming overwhelmed.

Make Collection an Act of Stewardship

Families may enjoy noticing potential materials during ordinary routines. Collection should remain selective rather than turning every walk or recycling day into a search for things to take.

For recycled items:

- 1 The adult decides whether an item is suitable.
- 2 Remove labels or personal information when needed.
- 3 Clean and dry the item appropriately.
- 4 Remove sharp, loose, plastic, metal, or adhesive components.
- 5 Store it where younger children and pets cannot access it independently.

For nature observation:

- follow park, beach, forest, tribal, municipal, and property rules;
- leave living plants, nests, eggs, wildlife, fungi, and attached bark undisturbed;
- avoid unknown berries, plants, mushrooms, bones, droppings, and carcasses;
- do not move rocks or logs that may shelter living things;
- photograph or sketch protected, fragile, or uncertain finds;

- take only common, naturally fallen items when collection is clearly allowed; and
- wash hands after outdoor exploration.

The practice is not “nature generously provides whatever we want.” A more respectful message is: *nature invites observation, and people have a responsibility to limit disturbance.*

Sometimes the best treasure is a memory, photograph, rubbing made where permitted, or drawing left in the sketchbook.

Make Food-Material Choices Without Moral Judgment

Some families prefer not to use edible food in sensory bins or crafts because of cost, access, waste, allergies, pests, cultural values, or household priorities. Nonfood alternatives can be a thoughtful choice.

Other families, classrooms, cultures, or feeding professionals may use selected foods for learning, celebration, art, exposure, or therapy. That use is not inherently disrespectful.

Rather than creating a universal rule, consider:

- Is the material safe for every participant's allergies and mouthing behavior?

- Is it affordable and acceptable within the family's circumstances and values?
- Will the activity create food-safety or pest problems?
- Is there a reusable or nonfood option that serves the same purpose?
- Is a professional using the material for a specific feeding or sensory goal?

Stewardship grows from thoughtful decisions in context, not from shaming how another family uses a handful of rice, dough, or other material.

Begin with a Transition or Invitation

A familiar beginning can help children shift into creative time. Using the tune of *Here We Go 'Round the Mulberry Bush*, sing a line such as:

This is the way we invent our world, when curiosity leads the way.

If songs do not fit, try:

- placing the material tray on a familiar mat;
- opening a sketchbook;
- looking closely at one object together;
- saying, “These materials are ready when you are”; or

- offering a choice between two starting invitations.

Avoid announcing that there are “no wrong answers” and then correcting the result toward an adult example. Safety rules may be nonnegotiable, but the design can remain the child's.

Wonder Without Interrogating

Adults can invite possibility with a few open prompts:

- I wonder what you notice.
- What might these pieces do together?
- Which material feels strong, flexible, rough, or smooth?
- What could help this stand?
- Would you like another piece, a tool, or more time?

Too many questions can turn play into an interview.

Sometimes the most supportive response is to sit nearby, describe one action, or say nothing.

Follow the child's lead. If they declare that a tube is simply a tube, that is also a valid observation. Creative play does not require transforming every object.

Offer Themes as Open Doors

Some children welcome a broad theme. Others prefer to begin without one.

Possible invitations include:

- a tiny village;
- a bridge for a toy;
- a home for an imaginary animal;
- a pretend weather station;
- something that rolls, balances, or makes a gentle sound;
- a setting for a story;
- a boat model for pretend water; or
- a machine that solves an invented problem.

Keep water experiments in a separate, adult-supervised activity using appropriate materials; recycled cardboard and unknown natural items may break down or contaminate water. “Build a bird home” should remain a model unless the family follows expert, species-appropriate guidance about real nesting structures and placement.

Children who prefer more structure may benefit from:

- a photograph for inspiration;
- a first step demonstrated on the adult's own materials;
- a visual sequence;
- two clearly defined choices;
- a familiar story prompt; or
- a collaborative project with roles.

Structure can reduce uncertainty while leaving room for original decisions.

ONE SMALL CHANGE

Select one safe box and one large piece of cardboard. Place them in an open, supervised area and ask only:

“What do you notice?”

Wait. If the child wants an idea, offer a choice between two themes without showing a finished model.

PAUSE AND REFLECT

- Were these materials designed for children, or have I evaluated the added risks of repurposing them?
- Could any piece be swallowed, wrapped around the body, splintered, broken, or misused?
- Am I collecting respectfully and legally?
- Does my child want open possibility, more structure, or a different activity today?
- Can I observe without filling every silence?

Protecting curiosity begins with protecting the child and the environment in which curiosity unfolds.

Trust the Creative Process

Step Back Without Disappearing

One gift adults can offer during creative play is trust: confidence that the child can make decisions, test an idea, and ask for help.

Stepping back does not mean leaving the child unsupervised. It means remaining present while resisting the urge to solve every non-safety problem first.

If a tower falls, try:

“You worked hard on that. Would you like to try again, change the base, or do something different?”

If an instrument model makes a different sound than expected:

“That sound surprised you. What would you like to change?”

Do not recommend tightening rubber bands; loose or stretched elastic can snap, become a choking hazard, or create unsafe projectiles. For sound exploration, use child-designed instruments made from intact, age-appropriate materials and keep volume comfortable.

The child may want a suggestion. Offer the smallest useful support:

- hold a piece while the child attaches it;

- demonstrate one joining technique on scrap material;
- help obtain a safer tool;
- name a property the child has noticed; or
- ask whether they want advice before giving it.

Trust includes respecting a decision to stop, dismantle, or ask the adult to participate.

Treat Mistakes as Information, Not Requirements

Experiments often produce unexpected results. Those moments can invite observation and revision.

But adults do not need to romanticize frustration. A child who is overwhelmed may need co-regulation, a break, direct instruction, a simpler material, or permission to abandon the project.

Try language that leaves options open:

- “That did not work the way you expected.”
- “What did this attempt show us?”
- “Would you like help, time, or a new plan?”
- “We can save it, change it, or take it apart.”

Persistence is not always the best goal. Flexible thinking includes recognizing when to pause and when an idea no longer feels worthwhile.

The most useful creative lesson may be: *an unexpected result gives us information, and we still have choices.*

Observe Nature as Designer, Not Supply Closet

Nature offers patterns, structures, processes, and relationships to study:

- burrs attach through tiny hooks;
- bird wings produce lift and control through complex shapes and movement;
- spider silk combines lightness with remarkable mechanical properties;
- leaves direct water in different ways;
- seed forms support dispersal by wind, water, animals, or gravity; and
- beavers change water flow through the structures they build.

The practice of learning from living systems to inspire human design is often called **biomimicry** or **bio-inspired design**.

One well-known example began when engineer George de Mestral examined burrs caught on clothing and fur. Their hook-like structures inspired his development of a hook-and-loop fastener later sold under the Velcro® trademark.

The value for children is not memorizing famous inventions. It is practicing observation:

- What shape do you see?
- What job might that structure perform?
- How does it move, attach, protect, carry, or balance?
- What could we learn without touching or disturbing it?
- How might a human design borrow the principle without copying the whole organism?

Use photographs, field guides, museum resources, or observation at a respectful distance. Do not handle wildlife, webs, nests, burrs, or unknown plants simply to make the lesson more concrete.

Replace the Pinecone Feeder with Observation First

Coating a pinecone with a spread and birdseed can introduce nut or seed allergies, string entanglement, unsuitable ingredients, mold, rodents, predators, wildlife habituation, disease transmission, and local restrictions.

Begin with a lower-impact activity: create a **bird observation station** indoors.

- 1 Choose a safe window or outdoor viewing place.
- 2 Keep children away from blind-cord, window, balcony, and fall hazards.

- 3 Make a simple tally or sketch of birds seen.
- 4 Notice movement, beak shape, size, color, and behavior without approaching nests.
- 5 Use a field guide or reputable resource to explore questions afterward.

Ask:

- How does this bird balance?
- What does its beak shape suggest?
- How does it use the wind, branches, ground, or water?
- What problem might this behavior help the bird solve?

If a family chooses to feed wild birds, first check wildlife-agency guidance and local rules. Use an appropriate feeder and food, place it to reduce window strikes and predator risk, clean it on the recommended schedule, remove moldy seed and waste, wash hands after handling, and stop feeding when disease outbreaks or local wildlife conditions make it unsafe. Adults should manage feeder cleaning and any bleach solution.

Observation alone is a complete way to build relationship with the living world.

Support Many Forms of Creativity

Creativity may look like building, drawing, telling a story, arranging objects, moving, making music, developing rules for a game, taking something apart, studying one detail, or repeating a familiar design until it changes.

Some children create socially; others need solitude within safe supervision. Some narrate every step; others communicate through action. Some produce a recognizable object; others explore material properties without a finished product.

Avoid ranking products or people:

- “This is the most creative one.”
- “You're our little artist.”
- “Your sister used the materials better.”

Describe process instead:

- “You tried three ways to connect those pieces.”
- “You kept the same shape but changed the material.”
- “You and your brother combined two different ideas.”
- “You decided the box should stay a box.”

Specific observation communicates attention without defining the child by one performance.

What Adults Learn Too

Adults sometimes feel responsible for making creativity happen. Children remind us that an adult cannot deliver another person's original idea.

Adults can prepare conditions:

- safe and interesting materials;
- enough time to begin;
- support matched to the child;
- permission to revise or stop;
- room for mess within household limits; and
- genuine curiosity about the process.

We do not have to direct every discovery. We also do not have to withhold help to prove that the child is independent.

The art is responsive support: enough presence for safety and connection, enough space for the child's thinking to remain visible.

ONE SMALL CHANGE

The next time a safe project stalls, ask:

“Would you like an idea, a helping hand, a break, or more time?”

Honor the answer. This makes support collaborative rather than automatic.

PAUSE AND REFLECT

- Am I stepping back from control while remaining present for safety?
- Does my child experience unexpected results as information or as failure?
- When is persistence helpful, and when would a break be more responsive?
- How can we observe nature without collecting or disturbing it?
- Which forms of creativity might I overlook because they do not produce a displayable object?

Trust does not mean refusing help. It means allowing the child's intentions to guide how help is offered.

Let Wonder Become Creation

Make a Safe Wonder Basket

If each person is invited to bring one natural treasure and one recycled item, a safer version begins with an adult-curated selection.

Over time, collect a few clean, legal, age-appropriate materials. Nature photographs, sketches, or memories may stand in for objects that should remain outdoors. Store the collection out of reach until an adult has inspected it for the current session.

For a family activity:

- 1 Choose three to seven safe materials suited to the youngest participant.
- 2 Place them on a stable mat in an open, supervised area.
- 3 Put any child-safe tools nearby and keep adult tools in adult hands.
- 4 Ask, **“I wonder what these could become?”**
- 5 Let each person build alone, collaborate, observe, or pass.

Someone might build a tiny bridge, arrange a story scene, invent a pretend machine, create a temporary pattern, or explore how pieces balance. Someone may prefer a suggested theme or model. Someone may use only one item. Someone may decide not to build.

Celebrate different noticing rather than a “best” project. Ask permission before displaying, photographing, altering, or dismantling a creation.

At the end, decide together which materials remain safe to reuse and which should be recycled, discarded, cleaned, or

returned only if doing so is legal and ecologically appropriate. Natural materials collected lawfully should not be moved to a new habitat where they could spread organisms or disrupt the environment.

Give Biomimicry and Inspiration Shared Language

Two words capture the heart of this brief:

- **Biomimicry:** Learning from patterns, structures, and processes in living systems to inspire human design.
- **Inspire:** Encountering something that helps a new idea begin or an existing idea change.

Use the words with care. Nature does not exist solely to provide human solutions, and inspiration does not mean taking or copying without thought.

Try:

- “The burr's hooks inspired a fastening idea.”
- “The shape of that leaf gave you an idea for a roof.”
- “We can study the web without touching it.”
- “Your story inspired me to arrange my pieces differently.”

People can inspire one another too. Acknowledge collaboration and avoid treating an idea borrowed from another culture, community, artist, or child as ownerless.

Connect Possibility with Story

One suggested storybook connection is ***Not a Box*** by Antoinette Portis.

The story celebrates a child's ability to imagine beyond an object's conventional identity. After reading, ask:

- What did the character imagine?
- What details helped the box become something else in the story?
- When might a box need to remain “just a box” for safety or practical use?
- What do you see that someone else might not notice?
- Would you like a box, a different material, or no building activity at all?

The story is an invitation, not a demand that every child use materials symbolically.

The Connected Caregiver Principle

Wonder can be the beginning of creativity.

Children notice patterns, possibilities, and relationships. Adults can nurture that thinking by slowing down, offering safe materials, making room for questions, and staying curious about the child's process.

The pathway is not always linear. Wonder may lead to observation, then imitation, experimentation, frustration, instruction, rest, collaboration, or a completely new question.

Creativity does not require endless supplies or a finished object. It benefits from:

- psychological and physical safety;
- time and permission to explore;
- materials matched to the child;
- structure when structure helps;
- support without unnecessary takeover;
- freedom to stop or revise; and
- respect for different ways of communicating and making meaning.

Adults do not protect curiosity by withholding every answer. Sometimes a fact, demonstration, or boundary opens the next possibility. The goal is to keep information in conversation with the child's own observations.

Try This

Notice how wonder already appears in family life.

Ask yourself:

- What familiar material attracted a second look?

- When did I pause before supplying an answer?
- When did instruction help the child move forward?
- What surprised me about the child's process?
- Did we respect nature and local rules?
- How did curiosity create connection between us?

Instead of asking only:

“What should we make?”

Also ask:

“What are we noticing, and what might it inspire?”

The answer may be a creation, a new experiment, a question, or simply a closer look.

ONE SMALL CHANGE

Keep a family **wonder page** instead of collecting more objects. Add one drawing, photograph, or dictated question after a walk or creative session.

This preserves the observation without removing anything from nature and creates material for future stories, designs, and investigations.

PAUSE AND REFLECT

- Does our collection remain small enough to inspect and use safely?
- Is the child free to create, imitate, request structure, or decline?
- Do I value questions and process as much as finished products?
- What have we learned by leaving something where we found it?
- Which ordinary thing is inviting a closer look?

Creativity may be waiting inside a material, a relationship, or a question we have not yet paused to notice.

WHERE THESE IDEAS FIT

The Invitation to Play establishes the role of safe, accessible spaces and open-ended invitations. *The Cardboard Box Theater* carries flexible materials into dramatic play and child-led storytelling. *Learning Lives in the Journey* helps caregivers notice the planning, experimentation, and revision within creative activity. Read together, this package provides broader context and helps caregivers choose where to explore a particular idea more deeply.

Key Takeaway

Children do not need endless supplies to be creative. They benefit from safe materials, time, trust, responsive support, and adults willing to notice alongside them.

Ordinary objects can invite flexible thinking, but “recycled” and “natural” do not automatically mean child-safe. Adults must curate materials carefully and protect children from choking, ingestion, strangulation, poisoning, sharp edges, contamination, and other hazards.

Nature can inspire without becoming a supply closet. Observation, photographs, sketches, and respectful distance may offer richer learning than collection.

Open-ended play is one valuable route into creativity, not the only one. Themes, models, instructions, repetition, collaboration, and cultural practices can also support original thought.

Wonder begins when someone looks closely enough to ask what else might be possible.

Learn · Connect · Grow

LEARN

What is one idea from this publication that you want to remember?

CONNECT

What did this publication help you notice or reconsider about the person in your care, your relationship, or your circumstances?

GROW

What is one small, safe, manageable action you may try, practice, or pay attention to next?

Research Foundations and Further Reading

The ideas in this brief draw on play research, loose-parts theory, practical-life education, bio-inspired design, consumer-product safety, and wildlife guidance.

Play and Creative Environments

- 1 **American Academy of Pediatrics: The Power of Play.** Describes varied forms of play and their roles in children's development and relationships.

- 2 **Simon Nicholson, “How NOT to Cheat Children: The Theory of Loose Parts.”** Nicholson proposed that environments with flexible variables can support experimentation, invention, and discovery. The theory is an invitation to expand possibility, not a safety standard; adults must still assess every material and context.
- 3 **Maria Montessori, *The Montessori Method*.** Montessori emphasizes carefully prepared environments, purposeful materials, observation, and respect for children's active discovery.

Material and Wildlife Safety

- 1 **U.S. Consumer Product Safety Commission: Small Parts Ban and Choking-Hazard Labeling.** Explains the special danger small parts present to children under three and the federal requirements for children's products.
- 2 **U.S. Consumer Product Safety Commission: Button and Coin Batteries.** Warns that swallowed button batteries can cause devastating injury within hours and should never be available as play materials.
- 3 **U.S. Consumer Product Safety Commission: Magnet Safety.** Describes the severe internal injuries that can occur when high-powered magnets are swallowed.
- 4 **U.S. Fish and Wildlife Service: Feathers and the Law.** Explains that U.S. federal protection generally prohibits possessing feathers from native migratory birds without authorization, including naturally molted feathers.

- 5 **U.S. Fish and Wildlife Service: To Feed or Not to Feed Wild Birds.** Discusses disease, predators, window strikes, feeder cleaning, and reasons observation may be preferable to feeding.

Learning from Nature

- 1 **Smithsonian Lemelson Center: George de Mestral - Velcro® Inventor.** Documents how observation of burrs inspired the hook-and-loop fastening system.
- 2 **Smithsonian National Museum of Natural History: Bio-inspired Design.** Introduces ways observation of biological structures and functions can inform design questions.

Together, these perspectives support a practical conclusion: flexible materials and close observation can invite creativity when adults pair openness with rigorous safety, respect children's different ways of creating, and treat living systems as relationships to study rather than resources to take.

A FINAL REMINDER

Choose and adapt any idea, reflection prompt, activity, or suggested response based on the individual needs, abilities, circumstances, and safety of the person in your care. Seek guidance from an appropriately qualified professional when a situation calls for individualized support. If anyone may be in immediate danger, contact the appropriate local emergency or crisis service.

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