

Cardboard Exploration

Cardboard is a simple material with endless opportunities for exploration. Children can quickly become engineers by designing, shaping, creating, and building.

Try It

1. Present children with various recyclable cardboard items: boxes, egg cartons, flat cardboard sheets, or any size cardboard pieces you can find. Try to find both a thin box board and a thicker “multi-ply” board to experiment with.
2. Provide various types of connectors: plastic screws and hinges, different types of tape (duct, plastic, masking, paper), child-safe glue guns, etc.
3. Offer children things with which to decorate the boxes (markers, paper letters, paper to draw on, etc.) and measuring instruments, such as rulers or tape measures.
4. Have on hand tools that can cut through heavy cardboard, such as child-safe saws or scissors.
5. *Option #1:* Just let the children play with the materials provided, and see what they build naturally.
Option #2: Provide a directed activity question, such as: Can you build a tall building, or make a tower, or design a room, or put together some other creation with your cardboard pieces?



TINY TIP!

Wearing aprons with pockets can help you keep track of the cutting tools you don't want kids to have unsupervised access to.



Learning Opportunities

Children become engineers and problem solvers every time they spend time building. Be sure to include different sizes, thicknesses, and shapes of cardboard to help children see the relational differences in scale: bigger, smaller, taller, shorter, longer, wider, etc. Just by playing, they'll practice spatial awareness and learn the language of geometric shapes: square, rectangle, circle, cone, tube, etc. If you're using measuring instruments, like a ruler, discussions on inches and feet happen naturally when talking about size differences. Feel free to also use nonstandard measurements (like number-of-hands tall and number-of-books wide) to practice these skills.

Open-Ended Questions

- What kinds of things are made out of cardboard?
(Have examples ready to show if needed.)
- How do you think that box is made?
- What happens if cardboard is thicker or thinner?
- How can we add one piece to another to build something new?
- What shapes do you see?



TINY TIP!

This activity is exciting for many adults too! Be mindful when adults start to take over a child's project, and guide them to take the role of "helper" or "assistant engineer" instead.

WORDS AND CONCEPTS TO EMPHASIZE

- Build
- Stability
- Balance
- Foundation
- Construction
- Measurements
- Relational sizes (smaller, bigger, taller)
- Shape names (circle, square, diamond)
- Tool names