

Tinkering and Making at Home

Tips for Families



Tinkering, or the playful, open-ended exploration of materials without a specific end goal, is an important part of STEM learning. It involves problem solving, creativity, hands-on learning, and more. You can help your child begin to develop science, technology, engineering, and math skills by making time to tinker at home. This includes tinkering yourself, so you can begin to understand the process and ways to encourage your child.

To begin exploring the tinkering process, consider the following strategies:

- 1. Think about how you like to work, play, and learn.** Do you prefer focused tasks or relaxing activities? Do you work best alone or with others? What drives you to learn something new? What do you find interesting, fun, and playful in your family life?
 - 2. Try tinkering and making activities yourself.** Gather materials found around your home, such as cardboard boxes, glue, spoons, foil, and old toys. Play around with putting things together and taking them apart. Try balancing them on top of each other. Explore how they work on their own and together. Then, try to make something new with those same objects. Afterward, reflect on your tinkering and making. What kept you interested and curious? Did you encounter a challenge? If so, how did you go about solving it?
 - 3. Consider the forms of tinkering and making that would best suit your child.** Having tried some tinkering and making yourself, turn to your child. What are their strengths? What do they like to do? What captures their effort and attention? Then, talk to your child about the tinkering activity they might enjoy. Visit community sites to help identify their interests.
- These could include local hardware stores, thrift stores with home goods sections (Salvation Army, Goodwill), craft stores, and public library makerspaces. You also might consider visiting a local museum, public garden center, or an organization that supports robotics or computer building.
- 4. Create a tinkering and making environment at home.** In addition to materials you already have, look for low-cost or free tinkering and making items like small tools, loose hardware, building blocks, gears, locks, machine parts, and wood pieces. Collect containers (egg cartons, tissue boxes, yogurt cups) to hold the materials. Designate a place in your home to store the items, or keep them in a large toolbox. Affordable ones can be found at thrift stores or garage sales.
 - 5. Make tinkering and making an ongoing family activity.** Identify future tinkering and making opportunities to explore. (Is your dog's leash broken? Is there a nightlight that doesn't work?) Be flexible—tinkering and making don't have to occur at planned times, and they can last as long as your child is interested. What's important is that your child is curious, creative, and engaged in these playful, hands-on activities.

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