

Time to Tinker

Bringing Maker Spaces to Younger Patrons

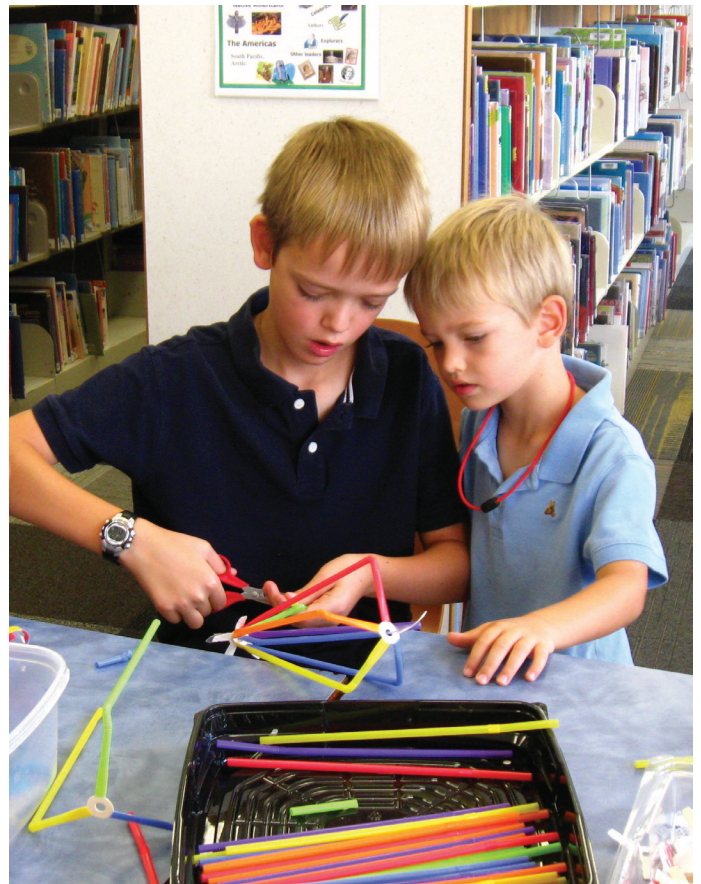
CAROL L. SCHEER

On entering our children's programming room on a Thursday afternoon, you'd be surprised at what you see: a room filled with parents and children embracing the maker movement.

Envision one group dismantling electronics on a tarp in the corner, while others add baking soda to colored vinegar and watch the colors explode. Others are planting seeds in egghead planters. Still more are testing their paper airplane catapults to see how far they can fly and if they can hit a target. Another group is working on string art and experimenting on making different designs. The last group is completing a building challenge with large plastic cups and craft sticks.

They're all attending our popular Elementary Make/Tinker Lab, which was designed to embrace the maker space and technology of our twenty-first-century library and also fill a gap in our programming. Our library system of fourteen branches in the Colorado Springs region has plenty of programming for babies through preschoolers and also for tweens. So we chose to aim this program for five- to eight-year-olds.

We run it concurrent with our tween programming to allow families to attend both more easily. Our program began with



the same concept as our tween programs—one activity for the entire group. As the first program approached, we realized that one activity could not fill the time or meet the needs of this group of attendees. Their abilities and interests were just too diverse.

The Logistics

We plan six activities for each program and set them up as stations. The children (and often their parents) enter the room as the program starts and sit in the center. They get a brief introduction of each of the day's activities. They are always eager to



Carol Scheer, a former teacher and substitute teacher, is currently a Children's Specialist at Pikes Peak (CO) Library District's Penrose Library. She previously worked at PPLD's Library 21c, where this program was created.



Building with pool noodle “Lincoln Logs.”

get started. We currently meet from 4:15 to 5:15 p.m. on the first and third Thursdays of each month during the school year.

To keep costs down, we use many recycled materials. Involving the community and library staff to help collect things also gives people a sense of ownership of the program. It seems we are always collecting toilet paper and paper towel tubes, water bottles and lids, old CDs, plastic containers, and so much more.

Our regular purchases include baking soda, vinegar, balloons, food coloring, craft sticks, and other inexpensive items. Last year, the program operated for less than \$20 per program—with up to seventy attendees per session. This year, we’re hoping to run it on a significantly lower budget.

The Planning

The Internet is full of great ideas for this program. Pinterest is especially helpful as it allows us to organize ideas by month and topic. Our library’s book collection offers more ideas, as do both children’s and parenting magazines. Common searches for both Pinterest and library catalogs are “STEM,” “science,” “tinkering,” “science experiments,” “outdoor science,” “coding,” “art,” and “spy science.” Our department’s staff easily collaborate as we each search websites and blogs, many of them specifically aimed at preschoolers and boys. We vary the activities each program among science, arts, and discovery, but almost always include something that flies. Some of our popular activities have included

- marble mazes
- name garlands
- dancing foods (think raisins, candy hearts, and spaghetti suspended in liquids and bobbing up and down)



Playing giant Jenga made using twelve-pack soda boxes.

- baking soda and vinegar experiments (expanding balloons and exploding colors)
- Alka-Seltzer experiments (35mm film canister rockets, chemical lava lamps, and such).

This popular program can easily be adapted in a variety of settings and applications, such as outreach situations, internal field trips, and library tours. Its basics can adjust for older and younger audiences.

We’ve put together a binder of projects—both ones we’ve used and those to be considered. Thumbing through it gives us plenty of ideas for tours and outreaches. As an outreach or tour approaches, we can consider the audience, cost, and space available. We can take one simple activity for children to participate in. This worked with the fitness theme of the 2016 Summer Reading Program. Each child in a grade-level group could do the “In a Heartbeat” activity where they insert a toothpick into a mini marshmallow and place it on their wrist pulse point. They can observe their heartbeat with each twitch of the toothpick.

We can also do an easy experiment in front of a group. We can demonstrate the chemical reactions of sugar and yeast to inflate a balloon. Storytime crafts can be transformed into experiments and observations. In addition, many activities can be used with multiple age groups, from toddlers to teenagers.



Creating with Strawbees.



Building with paper tubes and straws.

The Response

Our patrons are very supportive of this program. We have many regular attendees, and word has traveled quickly by word of mouth as well as by postings on our library website and in the community events section of our local newspaper. At the end of one session, a patron said, “I just wanted to say thank-you. It

was an awesome experience, and I’m so glad you guys do that here!”

As teachers have learned about the program, we have been invited to do school outreach programs. Some schools have also brought their students to the library for tours and field trips. It’s creating a positive image of our library throughout the community and increasing library usage. And the parents are having as much fun as their children! 🐛

What We Learned

- **Choose the best space.** We found this activity works best in a contained space when we’re at the library—either inside or out. Our children’s programming rooms and community rooms are popular locations.
- **Contain and clean.** We try to keep clean-up simple. Tables are covered with plastic tablecloths, and we put out rags to contain and clean up spills. (Baby wipes also work well.) Before the session, we put out recycling tubs and trash cans. When there is no sink in the room, we pour waste water into a recycling container for later disposal.
- **Recruit extra help.** It took time to building up a teen volunteer base for the program. But once volunteers participated, they had as much fun creating as did the kids. Our volunteers have brought additional ideas and variations on each project. We email the Tinker Lab teen volunteers or their parents at the beginning

of each month, asking for their help that month and requesting they let us know if they can come. Most of the time, several teen volunteers are available to help at each program.

- **Include the parents.** Parents are not obligated to stay in the program, but many do. While it may be our specific patrons, many of the parents also have as much fun as their children. Since many of our families have children of varying ages, we welcome younger children in the program. Often we set out DUPLO blocks or some other toy to help entertain them. Parents are responsible for corralling their younger children for safety.
- **Control the end time.** At about 5:10 p.m., we give a five-minute clean-up warning, asking children to finish the project they are working on. We start cleaning up at the less-busy stations to allow others time to finish.