

Little learners get hands on, minds on at Tinkering for Tots, a program designed for curious preschoolers to develop an innovative mindset and make connections through storytelling, play, artifact exploration and a take-home STEAM activity kit.

What connections are we making?

Highlighted Habit



COLLABORATE

Description: Work together, work as a team. Everyone helps. Listen to everyone's ideas.

Story

Title: *Lia and Luis, Who Has More?*

Author: Ana Crespo

Why we picked this book: All children can be mathematical thinkers, and Lia and Luis help them see different ways they can compare something using math. While Lia and Luis try to determine who has more, they count, measure, estimate, and weigh.

Artifact Spotlight

Name: Mathematica

Location: Across from the Davidson-Gerson Modern Glass Gallery.

To learn more about the story behind this artifact, please see the artifact spotlight on Page 2.

Open Exploration

Description: Collaborate with each other by exploring with balancing scales and making patterns with geometric tiles.

Skills your young learner is practicing: Pattern and shape recognition, working together, sharing, problem solving.

Questions to Ask Your Young Learner

What were Lia and Luis arguing about? What ways did they measure their snacks? What other kinds of things can we measure? How did Lia and Luis work together? What was your favorite part of the story? Did you work with someone else to make patterns? What shapes did you use? What kind of patterns did you make? What colors did you use?

Take-Home Activity

Title: Kaleidoscope

Materials:

- Cardboard tube
- Mirror pieces
- Tape
- Circle template
- Bendy straw piece
- Markers
- Stickers



Artifact Spotlight



Mathematica: Mathematica was the first exhibit designed to teach people about mathematics in a hands-on way. It includes a timeline that shows some famous mathematicians and some of the contributions of many cultures around the world. Math is a language everyone can understand, and Mathematica shows that in fun ways.

This is the third Mathematica exhibit that Ray and Charles Eames designed, and it has traveled from Seattle to Atlanta and now to The Henry Ford. This is the first time any version of the exhibit has been displayed in a non-science museum - and it is the first time it has been put together with so many parts to touch and move and look at up close. It offers guests a way to see and think about mathematics without using numbers, making it fun for all ages. And it continues to be as fresh, playful, and important as we look at new ways to learn and teach math.

These pictures show the Multiplication Cube, models of math ideas, and the Probability Board. Empty until marbles start falling and showing that you cannot know where a marble will land but you can see that as more fall, they fall into the red curve pattern and you can predict they will every time they drop.



The next pictures show interactives, including a Moebius strip (what you make by attaching the ends of a strip of paper together with a half-twist) and Celestial Mechanics showing how planets and gravity work.



Take-Home Activity



Kaleidoscope Materials:

- Cardboard tube
- 3 mirror pieces
- Tape
- Cardstock circle template
- Bendy straw piece
- Markers
- Stickers

1.



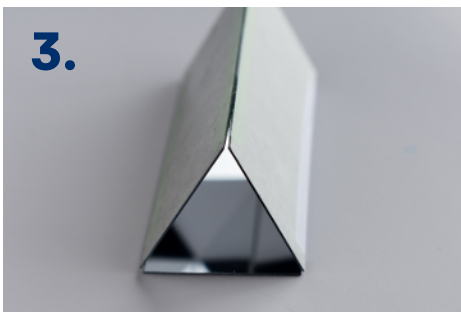
Directions:

1. Decorate your cardboard tube with stickers and markers.
2. Peel the backing off of the mirror sheets. Line up your mirror pieces, face down, leaving a tiny space between each one. Tape pieces together over the spaces.
3. Peel the film off of the mirror side, and fold the mirrors into a triangle with the shiny side in. Use more tape on top to hold it.
4. Slide the mirror triangle into your cardboard tube. It should fit snugly.
5. Tape the straw piece along the top of your tube so the bendy part hangs over the edge.
6. Cut out a cardstock circle.
7. Use a pencil to poke a hole in the center of your circle. Use markers to decorate it.
8. Place your decorated circle onto the straw, with the design facing the inside of the tube.
9. Look into your kaleidoscope to see the patterns created by your design.
10. Cut out the rest of your circles, poke holes in them, and decorate them. Try different designs, shapes, or even words to explore the patterns they'll create in your kaleidoscope.

2.



3.



4.



5.



8.



Coloring Sheet

