AM Preschool 4’s

HOW THINGS WORK

To see the way something works, you can take it apart and look inside. To understand how something works, you have to explore the principles that make it work. This unit dealt mostly with the mechanics of movement and explored the following questions with the children:

- How do things work?
- What are tools?
- What is the best tool for the job?
- What are machines?
- How do machines work?

Our Favorite Theme Books

Circle time is a great time to hear stories that help friends learn more about our theme. This month our favorite books were:

- *What Do You Do With An Idea?* by Kobi Yamada
- *Oscar and the Bird: A Book About Electricity* by Geoff Waring
- *How Do You Lift a Lion?* by Robert E. Wells

Mango Monkey Says…

Our wise puppet friend visited the friends this month to talk about making choices. We shared the book *What Should Danny Do? School Day* by Ganit and Adir Levy to help friends think about the choices they make. The book has eight different endings depending on the choices the children make. Then, we had a discussion about how we can all contribute to help make the school day go well by making good choices.
Week 1

How Things Work

Tools

During the first week, we studied and practiced with several kinds of Hand Tools. We learned “right to tight, left to loosen” while working hard to get different sized screws into wood with a Screwdriver. We realized how hard we had to work to pound roofing nails into a log with heavy Hammers. A Tool Memory Tray game reminded us of all of the hand tools we have learned to use in the Make Shop. Trips to the Make Shop to take apart old electronics were very popular. Using precision screwdrivers, pliers, and scissors, we revealed the inner workings of CD players, phones, walkie talkies, coffee makers and clocks. The Dramatic Play Center was transformed into a Mechanics Shop, with plenty of pretend tools to fill tool belts and travel around the room fixing everything!

Week 2

How Things Work

Simple Machines

We began our second week of study with an exploration of two categories of simple machines: **Inclined Planes**, which include ramps, wedges, screws, and zippers; and **Levers**, which include screwdrivers, hand drills, balances, dollies/handcarts, pliers, wheelbarrows, hammers, and tweezers. We added a long **Pulley System** stretching between the group areas so we could send messages to each other, and we worked on exploring and creating **Gear Trains**. We took a close look at **Wheels and Axles** as we painted with wheels and played with lots of vehicles. We learned that machines make work easier; simple machines are often combined to make different machines; and machines need a force such as gravity, muscles or motors to work.
Everyday Machines

Machines are a part of everyone’s daily life. During this week we did a scavenger hunt of many familiar and not so familiar kitchen and office machines, and we discussed how each helps us make work easier. The Mechanic’s Shop in Dramatic Play expanded to include tricycle repair. We made books about simple machines we use in the Art and Writing Center: a stapler, hole punch, ink roller and scissors. Kitchen tools were used to make playdough (whisk and spoon) and cut dense modeling clay (plastic knives). One of our Daily Work tasks was to sharpen a pencil with both an electric and manual pencil sharpener. We read a story about how crayons are made and then reversed the process by using the Crayon Melting machine to liquify the crayons and paint with them.

Inventions and Explorations

During the last week, The Creation Station in the Dramatic Play Center was a huge hit. New and interesting materials appeared daily for the children to make into fabulous creations! We brought the large Architecture Blocks into the Green Room and worked together to fill a lot of space with inventive buildings. We wrote short stories about imagined inventions. Everyone learned the basics of an electric circuit as we experimented with Snap Circuits and Alligator Clip Circuits to make different devices and toys work in the Make Shop.
Birthday Celebrations

Simon’s circle time friends and family listen to his mom read a birthday story.

Archie’s mom, dad, baby sister and grandpa visited to celebrate Archie’s birthday.

Mio’s mom reads a story to celebrate her birthday.
We say goodbye and best wishes to Matteo and his family as they start a new adventure in California.

Thanks to Curt Boirum from the CMU Planetary Robotics Department for talking with the friends about robots and demonstrating how a drone with a camera is flown with a remote control.

Kipton tests a Lego buggy that he made.

Atticus and Emma take a Buggy Ride.

Max gets a close look at the buggy insides at the CMU Buggy Race display.

Aras pets Charlie the Therapy Dog who visited from Animal Friends.