To see the way something works, you can take it apart and look inside. To understand how something works, you should 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 machines?
- How do machines work?
- What is the best tool for each job?

**How Things 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:

- “Galimoto”, by Karen Lynn Williams
- “Sally’s Great Balloon Adventure”, by Steven Huneck
- “Duck on a Bike”, by David Shannon
- “Oscar and the Bird, a Book About Electricity”, by Geoff Waring
- “Who Sank the Boat”, by Pamela Allan

**Mango Monkey Says…**

Our wise puppet friend met Stick and Stone this month to talk about making a friend and keeping a friend. We read the book, “Stick and Stone”, by Beth Ferry. The story communicates how to look out for friends and take a stand and how friendship should be a balance of give and take. Mango Monkey brought a stick and stone to the children to role play and start a conversation about how to treat others. This book exemplifies a story of true friendship and helping one another. Even when a disaster occurs, the two friends find each other again.
**Tools**

During the first week, we started our discussion with a focus on tools. The friends learned that each tool has a separate job. We combined the How Things Work theme with the Healthy Mind and Body theme by making working locker tags. We used brass brads to move a spinner so that the children could move it every day to reflect their emotions (happy, sad, sleepy, silly).

The Dramatic Play Center was transformed into a Fix it Shop. A workbench and tools were available to the friends to build and fix things. The Make Shop was filled with old machines to disassemble to see what makes some machines work. We were finding gears, wires, wheels and circuits. We used screwdrivers, pliers and scissors to help us take the items apart. In the Discovery Area, the children had the opportunity to use a variety of wedges such as knives, choppers and blocks to split clay into pieces. In the kitchen, we made fruit salad by using special kitchen slicers to cut our fruit into bite sized pieces.

**Simple Machines**

During week two, we investigated simple machines. 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. The children had lots of practice using various tools (basic hand tools in woodworking, eating utensils, and writing and painting implements). We learned that levers are all around us (door handles, light switches, the claws of a hammer, scissors). One of our favorites was lifting each other on a giant lever – the seesaw! On the playground, we saw that gears are a form of the wheel and axle on our tricycles and wheelbarrow. The inclined plane is a simple ramp. We discovered this by running cars and balls down the ramp of the playground sliding board. Using the ropes and wheels of a pulley, we lifted heavy objects.
Week 3

Every Day Machines

During week three, the PM Preschool friends learned machines are part of everyone’s daily life. During the week, we did a scavenger hunt of many familiar and not so familiar kitchen and office machines. We discussed how each help make work easier. The children used the iPad to send a Message From Me and explored the insides of old electronic machines and toys after taking them apart using tools. Another new experience for the friends was to draw with melted crayons! The friends watched as an electric crayon melter melted whole wax crayons into liquid. We also read a book about how crayons are made in a factory. The children listened to the story “Galimoto”, by Karen Williams, and observed how the main character Kondi assembled his toy galimoto from wires that he found. The children were excited when given the opportunity to make their own unique wire toy or sculpture! Sometimes, we use tools for a different purpose. We had a fun day using a salad spinner to make spin art!

Week 4

Explorations and Inventions

During week four, the creation station was a huge hit. New and interesting materials appeared daily for the children to make fabulous creations. Some friends recited ideas about a unique invention and drew a picture about their invention that they imagined making! The children enjoyed learning to use a table top pencil sharpener with a crank handle and a see-through case to view the wheel and axle to sharpen our classroom pencils. We also learned how to build with our unique Architecture Blocks.

Everyone learned the basics of an electric circuit. In the Make Shop, as we experimented with Snap Circuits using switches. We also discovered how to put together electrical battery-operated circuits to power toys.
Carnegie Mellon University Spotlight:
The Carnegie Mellon Buggies

The CMU Buggy (also called “Sweepstakes”) is a unique race that has been held on and behind the Carnegie Mellon University campus during the spring carnival since 1920. We walked to The Cohon University Center to see the Buggies. The friends had a chance to lay down inside a buggy and move the steering wheel. It was tricky learning how to back in! The children also inspected the robot buggy to see circuits in action. We had a wonderful experience building LEGO buggies to race down a track.

Special Visits and Birthday Celebrations

We celebrated two birthdays in the PM class. Our thanks to David Howe and Natalie Green (Evelyn) and Vivian and Bill Benter (Henry) for reading and having snack with us.

Ms. Debbie from the Carnegie Library read to us about sheep and where wool comes from.

Our student worker Shalaya helped us celebrate a belated Black History Month by reading, “Shades of People, by Shelley Rotner and planned activities related to Jackie Robinson, Dr. Martin Luther King and Madam CJ Walker.

The PM Fours class joined with the AM Fours to travel to the Planetary Robotics Lab to learn how their machines work. They are testing the rover’s durability to travel on rocks and sand. It was interesting to see a drone demonstration. We also noticed pulleys, wheels and axles and propellers in the lab!
Music Experiences
with Mrs. Hraber

This month, Pete the Metronome showed up for music class wearing wheels! Mrs. Hraber taught us songs about vehicles with wheels: planes, trains, buses and cars. We used instruments, including tambourines, triangles and xylophones to tap to the beat and mimic the sound different vehicles make.

Our Month in Photos

The friends used their imaginations to assemble Architecture Blocks.

Ryder and Zeynep learned how to use a battery-operated circuit to make toys move and light up.
Our Month in Photos

Building together with Architecture Blocks

Friends playing the Build A Robot Game

The PM crew cruising the campus and posing for a group picture!

Ryder pretended to wash Lucy Jo’s hair in the Dramatic Play Center’s beauty shop after learning about Madam CJ Walker.

Cornelia learned how to use a hand cranked pencil sharpener.

Ryder helped Lucy Jo use the iPad to send a Message from Me.
Sylas and Satoshi enjoyed manipulating pieces to put together puzzles.

Satoshi used a screw driver to take apart a toy.

Putting together Snap Circuits made hands-on learning about how electronics work fun!

Enjoying each other on the playground!

Ms. O’Neill demonstrated a sink or float science experiment.