Inarguably, technology is an important part of our lives. It takes on many forms in the classrooms from a tape recorder, to a camera, to a video recorder, desktop computer, and most recently, the tablet. Over the last few months, teachers and children have been part of an iPad research project focusing on ways to use technology to support young children’s learning. Technology, such as the iPad can be used to support scientific inquiry, mathematics, oral language, communication, and collaboration when experiences are thoughtfully planned out by teachers. The project began with teacher and researcher training on the use of the iPad and time for them to find and experiment with age-appropriate applications, or ‘apps’, and then introduce it to the children as a learning tool.

Under the guidance of Dr. Swaminathan, student researchers recorded and observed children and teachers interactions as they used the iPad in a variety of ways. Preschool classes, on visits to the Arboretum, took the iPad and made use of a drawing application. This allowed children to sketch their outdoor observations. They also used the camera feature and took photos of their nature walk. Upon returning to the Center, they revisited their experiences by reviewing their photos. The ability to see the photos instantly coupled with the tactile experience of the iPad makes the tablet very appropriate for this age group.

The children also had access to a scope attachment to the iPad allowing them the opportunity to see the enlarged image on the iPad. Observing plant root from beneath the container; sketching observations on the iPad.

Keriana uses a scope to enlarge the skin of the watermelon while Sophia captures an image of it on the iPad screen.
screen. From there, children can capture a photograph of the enlarged image and zoom in/out as needed. Children work together as one holds the scope while another can manipulate the image. This technology especially fits in well with our current nature investigation as children used this feature to closely examine materials such as leaves, roots, plants, and bugs. Shortly, Dr. Swaminathan and her students will code their findings and share an overall summary.

Below is an excerpt from an interview with Dr. Swaminathan about technology in the classroom:

**How does technology support learning in the classroom?**

Technology supports children develop cognitively, socially/emotionally, and physically. Dr. Swaminathan suggests that cognitively, technology supports learning by giving children the opportunity to see or visualize that which is not possible. For example, through technology, it is possible to show children what one million looks like while in reality, this is close to impossible. Technology also provides children the opportunity to manipulate 3-D images allowing them to see inside and around geometric objects such as cubes. And, an application such as Google earth allows children to see earth, space, stars making the mysterious more accessible.

Dr. Swaminathan suggests there are social-emotional benefits as well. Children have control when using technology; good technology. They decide what to do and where to go adding to their confidence.
The CFDRC continues investigating nature with young children. It had been rewarding to get children outside and in touch with their surroundings. Using the resources on campus and all their senses, children have had a variety of opportunities to experience nature.

Each of the classrooms, including the toddlers, have taken several trips to the Arboretum on campus. Each visit has a specific focus which children and teachers prepare for prior to the field trip. For example, one visit may center around a listening walk whereby children and teachers use their sense of hearing to experience the Arboretum. Upon return, they may discuss the different sounds and record them on chart paper.

Ms. Patrice is very excited on the visit to the Arboretum.

Jaiden turns over boards in the Arboretum to discover creatures are living there.

Children in Ms. Haley's class observe and sketch what they see in the Arboretum. On the right, they class spots something interesting living on the bark!

The children gather around Callie as we return our tadpole turned frog to nature on our walk through the Arboretum.

Sam and Jojo look for slugs living under the piece of wood.
The children in the toddler room have been learning about weather in nature focusing on rain. The inquiry began with children learning about the water cycle. They read the story *To the Mountains and Back*, Drippy the Raindrop by Joel M. Kimball in which the main character, Drippy, is a rain drop that falls from the sky and ends up back into the clouds. It is a very age appropriate story in which to explain the water cycle to the children and most of them were able to re-tell what happened in the story. The children then did a couple of activities based on the new concept that they had learned. They did a wet versus dry cotton ball experiment in which they were able to feel which cotton ball felt heavier, as well as comparing what was the same or different between the two cotton balls when they were squeezed. They made comments about the water dripping out of the cotton ball and compared this to the actions that took place in the story. In addition to this, the children did some art based on the concept. They used cotton balls (or clouds) to drip paint (or rain) onto their papers.

They cooperatively made a rain gauge to measure the amount of rain that falls during various storms. After the first rain storm, the children were asked to hypothesize what they
thought happened to the rain gauge. Hypotheses included it “Got wet” and “Water in it.” The children then observed the results and compared their hypotheses. They then plotted out the measurement on a graph. During a later storm, the children placed the rain gauge outside again. They noticed that the second storm made the water in the gauge rise again and they compared the new amount to the amount from the first storm. Again, they recorded their results on the graph.

Shaylene records the rainfall on a chart.

**Teachers: Amie Therialut, Carrie Woodward, and Julie Garceau**

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## Making a Rain Gauge

### What You Need

- Clear plastic container about 8-10 inches high
- Small pebbles or marbles
- A 12-inch plastic ruler

### What to Do

Place several pebbles into the container and add water until it is about one-inch deep. (Measure with the 12-inch ruler.).

Note: The pebbles and water will make the container steady against wind and the one-inch of water will provide a base level for measurements.

Place the rain gauge outside on a level surface. Make sure it is away from any overhanging tree branches or building eaves. Children can monitor the gauge every day. Have them measure the rainfall at about the same time each day.
In the spirit of the Willimantic tradition, it has slowly become a CFDRC annual event to conduct our very own Boom Box Parade. With signs and banners in hand, children, teachers, and families marched through campus greeted by faculty, staff, and SOAR students all cheering them on. We are proud that the CFDRC repents so many cultures including: Uganda, Nigeria, Jamaica, Chile, Argentina, Poland, Russia, Puerto Rico, Mexico, The Philippines, Dominican Republic, Iran, and so many more.

Rocks and Water

Last month, The Green Room, took a walk around Eastern’s campus as an initiation to their study of rock gardens. With clipboards in hand, preschoolers and teachers set out to explore the rock and water features around campus. Teachers and children alike marveled at the beauty of the features of the ponds and gardens.

Upon their return, they began an in-depth investigation of water; its movement, properties, the cycle of water. In addition, they explored rock gardening compared to the type of gardens they have on the back deck of the CFDRC. Teachers: Cynthia, Ashley, Angelica
Curriculum Corner:  
**Mathematical Thinking and Preschoolers**

*Teachers: Cynthia DeJesus, Ashley Anderson, Angelica Booker*

What does math mean to your preschooler? What is all the counting about? Mathematical thinking provides young children with the foundational skills in numerical and spatial thinking and reasoning. Mathematical thinking including numerical and spatial thinking helps young children to problem solve.

*Where do you see mathematical thinking happening?*

Mathematical thinking is going on around your preschooler constantly, for instance, during snack time asking children, *how many napkins do we need? Do we have enough for everyone? How many goldfish are left?* Asking these types of questions will help your preschooler to problem solve and influence their way of thinking. When observing a child in the art area they may have to figure out how long they need their string in order to bead a necklace, or how many beads will fit on their pipe cleaner. As adults, we can further help young children to become mathematical thinkers the following website provides information on ways to promote this way of thinking:

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**Supporting Math: Tips**

**Math all around**
- Let them measure when you bake.
- Ask them to figure out how long of a hose you need to reach from the faucet on the side of the house to the garden.
- Let your child figure out how many miles you’ll be driving on your next trip by using the information on a map.
- Sort silverware by knives, forks, and spoons. Sort cards by suit or numbers.

**Math games**
- Many games that we take for granted are excellent math lessons.
- “Go Fish” teaches counting and grouping in sets. Board games that use dice teach addition and counting.
- Beans, stones, or marbles can be used to play number games. Let your child develop his or her own games by sorting beans into different sizes or types, setting up the rules for a counting game.
- Play store with the items in your cupboard.
- A pan of water and some jars or cups of different sizes will amuse a child for hours while teaching capacity and volume.

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Left: Dennis is using links to measure how tall the bean plant grew. Right: Alexis is using string to bead, “I wonder how many beads will fit?”
From the Desk of the CFDRC Director

Dear Families and Friends of the CFDRC,

It has been a pleasure to work with you all this past year. If you are moving on, we wish you all the best and hope you come back to visit your CFDRC Family in the future. To those returning, we look forward to another year of growing and working together. Please let us know if we can be of assistance to you and your family.

A few housekeeping items for returning families: Please make sure you return the packet from the Administration Team which includes update to materials required for enrollment. Please read and review the updated handbook paying careful attention to arrival and pick up policy and procedure as they are updated and will be enforced. If you have any questions, please do not hesitate to contact us.
August

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Please note all children must be in their classrooms ready to begin the day at 9:00 AM daily. Please refer to the Family Handbook for detailed guidelines as it will be enforced.

Advisory Council

The CFDRC extends an invitation to CFDRC family members who would like to become a member of the Family Advisory Committee. The purpose of the Advisory Committee is to provide advice and counsel to the director on operating policies and procedures as they relate to the CFDRC.

The community acts as a channel for information and feedback between the CFDRC administration and families. This is not a formal decision-making body and does not have oversight or responsibility for the CFDRC budget. The committee will meet on the first Friday of every month from 9:00-10:00 AM at the CFDRC.

I encourage you to join this committee. If you have questions or would like to join this committee, please talk to Niloufar in person, on the phone at 860-465-5270, or email her at rezain@easternct.edu.

Announcements

Congratulations: New Arrival

We congratulate Ms. Ashley and Michael as they welcome their first child. Nora Lynn was born on August 1 weighing in at 7lbs 12 oz, and 21 inches long. Mom and baby are doing well.

Block Play: What is it really?

We will answer this question and a few others next semester as, under the guidance of Dr. Jeffrey Trawick-Smith, in a teacher as researcher study. Eastern students will be a part of this study as well. Stay tuned as we study block play; an area of little research.