

Children explore engineering and science during annual STEM event

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There is a time of year when the New England District opens its doors to young people providing them a glimpse of what it is like to work for the U.S. Army Corps of Engineers, New England District. That day, Take Your Daughters and Sons to Work Day, took place April 21 at the Concord Park Headquarters in Concord, Massachusetts.

About 29 children ages 8-12 visited the District to take part in the all-day event sponsored by the Federal Women's Program and the Equal Employment Opportunity Office. Scott Acone, Deputy District Engineer for Programs/Project Management, began the day by greeting the children and wishing them an exciting day.

The children separated into three groups following an ice breaker led by Tina Chaisson. This year Chaisson named the groups after three fast food chains – McDonald's, Wendy's and Burger King -- and broke the children into six activities, three in the morning and three after lunch, for a total of 45 minutes each session. The groups rotated through all of the activities so no one missed an opportunity to see and learn something.

"Friction is Everywhere" took place in the Concord Park Cafeteria. The session explained what friction is, how we measure it and why it's important to engineers.

Mike Riccio and Doug Fransioli were also involved with the session. The children learned about slip forces and angles related to friction by stacking different materials and by loading materials on different surfaces to see how friction changes with the change in angle.

During the hands-on portion of the activity, the children got a chance to plot the friction angle of their own shoes.

Lisa Winter, Megan Burke and Patrick Blumeris hosted the coastal erosion activity in the Massachusetts and Connecticut Conference Rooms. During the session they explained how waves can change the shape of the beach and what engineers can do to protect the beach and buildings along the coast. The trio demonstrated this point using a model. The children also learned about barrier islands, breakwaters and jetties and other ways to protect the coast.

The Egg Drop Experiment, operated by Taylor Bell, Dan Vasconcelos and Christine Jacek, took place in the New England Conference Room and the Building 1 stairwell leading to Logistics. This activity challenged kids to design a protective container to prevent an egg from breaking upon impact.

The Egg Drop Experiment team encouraged the children to get creative with their containers, building only with materials provided to them. Once the children finished their creations, the activity moved from the New England Conference Room to the stairwell. The containers were tested by dropping them 10, 20 and 30 feet. Jahmar Reeves was one of the few whose egg survived the 30-foot drop. "I was so excited to be able to drop the egg myself at 30-feet and win!" he said.

After a pizza lunch where the children could reconnect with their sponsors and update them on their day, the children were back in their groups and off to the last three activities for the day.

The "Underwater Sampling and Surveying" activity explained that scientists and engineers sometimes need to know what is at the bottom of the ocean and how they get the information. Hosts Marie Esten, Aaron Hopkins and Mike Narcissi came up with some fun activities for the children to get an idea of how New England District engineers and scientists collect information at the sea bottom floor. These included

having the children perform core samples on cupcakes and guiding their team mates to find “underwater treasure” using special cameras and walkie-talkies.

Viola Bramel and Christine Jacek hosted the Water Safety activity in the Concord Park Cafeteria. This high-energy activity included life-jacket races “in the rain,” a cold water challenge and scenario games based on real-life, recent safety events. “This was an activity that encouraged teamwork, got the kids moving and taught skills that could save lives,” said Bramel.

“I really liked Water Safety,” said Hanna Rausch when asked about her day at the District. “The games were fun.”

Her sister Cecilia agreed. “I liked that we were actually participating instead of just listening to someone talk to us.”

Paul Young, Jessica Rudd and Tracy Dorgan had an impressive display of rocks, minerals and fossils in the New England Conference Room. Pointing to items from their display, the team talked about how rocks, minerals and fossils form and that they are surrounded by them.

All of the children touched and held samples of the display to include gold, silver, copper, diamonds, clams, whalebone, wood, a dinosaur footprint and fossilized animal droppings. Dorgan told the children that many of the items they were touching came from New England.

At the end of the day, as a special treat, Young gave away mounted samples of rocks, minerals and fossils by picking children’s names from the day’s participants. Children whose names were not called still got a chance to bring home as many unmounted rocks, minerals and fossils they could carry away from Young’s collection.

“My favorite activity was the geology,” said Hayden Bargerhuff. “It had lots of fossils. I have my own rock collection at home.”

Harmoni Rodrigues enjoyed handling the samples during the geology activity. “I liked all of the diamonds!” she said.

In addition to the hosts, Jackie DiDomenico, EEO Officer, Denise Kammerer-Cody, FWP Manager, Jerry Nunziato, Ann Marie Harvie, Brian Murphy and Marilyn Ortiz assisted behind the scenes throughout the day.