

Robotics with Randy Steele

BY A 6TH GRADER

Above: Photo of the EV3 robot, from the Lego website

What do you think of when you think of a robot? On October 28, Randy Steele, a Robotics instructor, came to Shaw School and led the students to think of an EV3 robot.

A robot is a computer based object manufactured by humans. In the case of the EV3 robot, it is manufactured by Lego. An EV3 robot is programmable. When you use an EV3 robot, you also need an app to program it. The robot needs to connect to your computer or iPad with either a cord or bluetooth. The Shaw School

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ROMAN HISTORY

BY A 4TH GRADER

You know the old adage, “Rome wasn’t built in a day”? The Shaw students agree, and they were surprised to learn that it actually took about 514 years to build Rome. At Shaw School, as part of social studies, the students are learning about the Fall of Rome, which occurred at the start of the Middle Ages.

First of all, the students did many hands-on activities to help them learn. For example, they made columns because the ancient Romans also made columns to depict events. The students made the columns by wrapping long pieces of cardstock into tubes. After that, they got other pieces of paper and drew scenes of events that depicted Rome’s expansion. Then,

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Science this Year

BY A 3RD GRADER

Where do you think rain comes from? This is one of the main questions the Shaw students have been learning about in science.

When you hear the word *water*, you are probably thinking of *liquid water*. *Liquid water* is thousands and thousands of water molecules that are clumped together but can move freely around each other like in a lake or glass of water.

Evaporation and condensation are two important things the students are learning about. Evaporation is when liquid water transforms into water vapor. The water molecules get very far apart so that the water is microscopic and can join the atmosphere. Condensation is the opposite of evaporation. Condensation is when

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Learning about Mushrooms

BY A 4TH GRADER

Did you know that a single cedar tree has at least 600 types of fungi associated with it?

In October, the Shaw students joined the students from Decatur Island (on Decatur Island) to learn about mushrooms. They learned about mushrooms from Lee Whitford, a

mushroom expert. The students also had fun with apples because it was Decatur’s Apple Day.

Lee Whitford has been studying mushrooms for over 40 years. She also teaches at Seattle City Light and the North Cascades Institute, and in 1989

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Mushroom Art

BY A 6TH GRADER

Have you ever tried to make a mushroom? In October, the Shaw School students made mushrooms out of wood and paper.

Diane, the teacher, told the Shaw students that they were going to make mushrooms. To start the project, the Shaw students went into the woods and got sticks that Diane cut with a saw into the right lengths to be mushroom stems. The students then took the sticks and glued them to little stumps of wood.

The next day, the students took pieces of cardboard and bent them into the shape of cones to make the cap of the mushrooms. They then used the Paper Maché method to cover the cardboard caps. When the caps were dry, the students cut strips of paper from an old book, which were used as the gills of the mushroom.

To finish, the caps were glued to the stems, and the mushroom caps were painted. Then the students took the mushrooms outside and put moss on their bases. As the students set the mushrooms in the grass, they found that the mushrooms looked almost exactly like real mushrooms in the woods.

Beach Hunt

BY A 6TH GRADER

In September, the Shaw Island School students went to South Beach to meet up with the Decatur Island School students to play various games.

When the students first arrived at South Beach, they started off with a treasure hunt exercise to find and label objects according to questions they were given. For example, the paper might say, "Find something dead" or "Find something living." The students found objects like sand, the ocean, or the big granite rock. The students then took a break for lunch.

Afterwards, the music teacher came to play some songs with them and to sing.

Then all the students were divided into two groups. Their goal was to make erosion-proof shelters. One of the groups tried digging a big hole and covering the hole with boards and seaweed. The other group tried leaning giant logs on the side of the hill that went down into the beach. They covered that fortress with logs. Both forts were able to withstand water, rocks, and sand hitting them.

About

the Shaw Times

Shaw School students write *The Shaw Times* for the community. The Shaw School Foundation (shawschoolfoundation@gmail.com) provides for the production and mailing of *The Shaw Times*—and also provides support for the school's music, art, and robotics programs; field trips; and swimming lessons for all the island's children.

The Shaw School Foundation is dedicated to ensuring that every student on Shaw Island learns in an enriched and high quality educational environment. We are proud of the public school education the school district offers our students, and we believe the community is vital to our school's continued success. To that end, we raise money to fund school-approved programs and materials that expand or enhance the public school learning environment.

For more information about or to make donations to The Shaw School Foundation, please contact a board member: Amber Borner, Chris Carpenter, Shannon Klohr, Julie Wilson, and Anne Wysocki.

Lentil Science

WRITTEN BY A FIRST GRADER

What is lentil science? We pour, measure, and observe lentils in different ways using a job box, bottles, and funnels.

We do experiments with lentils. One experiment is to pour lentils into a job box. Then we put bbs in the box. Next we put a magnet under the box to find the bbs.

We also fill bottles with lentils and time how long it takes to pour them back and forth. Liz^{na} teaches Ava and me lentil science. Liz is a good teacher!

Poetry at Shaw Island School

BY 3RD GRADE STUDENT

What do you think of when you hear the word *poetry*? The Shaw students can tell you what poetry is all about! This year the three older students at Shaw Island School have been studying and writing poetry. So far the students have covered three different types of poetry: acrostic, cinquain, and haiku.

The first type of poetry the students studied was acrostic poetry. The acrostic is an ancient poetic form. To make the base for an acrostic poem, the writer chooses a word, for example, the word *peppers*. Each letter starts a line in the poem or the letter appears in the line. Below is an example by a Shaw School third grade student. As you can see in the example, some acrostic poems use phrases, but others only use one word on each line.

Peace fills me as I bite
 dark gre**En** peppers grown in your yard
 life is **P**reposterous while peppers are not ripe
 you cannot wait until they are ri**Pe**
 swe**Et** goodness fills my mouth
 a ga**R**den so good will have the best peppers
 deliciou**S** your peppers will be

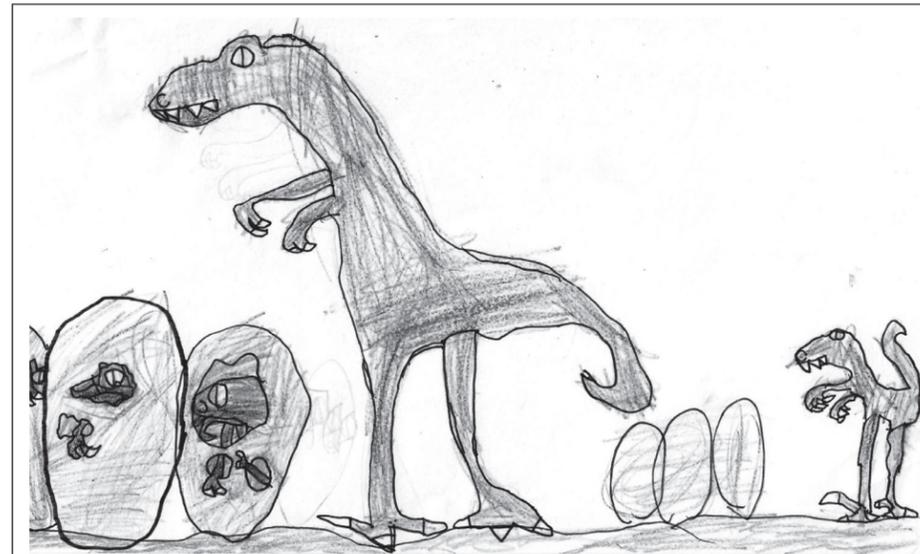
The second type of poetry the students wrote were cinquain poems. Cinquain poems were invented in 1911. Cinquain poems have a different number of syllables on each line. The first line has two, the second has four, and then it goes six, eight, and two again. This type of poetry can sound like one continuous thought. Here are two examples by Shaw School students:

Misty	Croaking
Morning was cold	Frog in distance
Dripping shoes squished and squeaked	Dripping leaves above me
While the calming patter of rain	Water drops making my socks soaked
Came down	Numb feet

The last type of poetry the students wrote were haiku poems. Haiku poems have five syllables, then seven syllables, and then five syllables again. These ancient Japanese works of art sound very nice. In one of the books the students looked in for examples, at least a fourth of the poems in that book were not haiku poems. The students learned that it is better to have a poem with similar syllables to a haiku than no poem at all, but if you were entering a haiku contest your poem would have to be an actual haiku poem. Here are examples by Shaw students:

Fire grows up higher	Looming clouds above
Rain gently seems to notice	Block sun as rain pitters down
Fire drops down sizzling	Soaking all below

The Shaw School students will be learning about and writing poetry for the rest of the year, and by the end of it they will be poem experts. The Shaw students never knew there were so many types of poetry and there are still many types to learn.

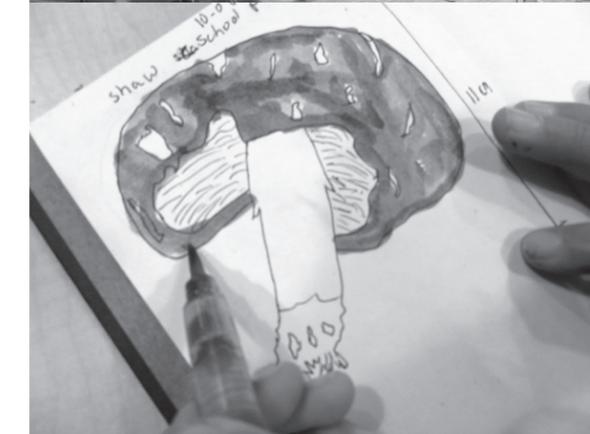


I like drawing a lot!
 I make books and draw pictures.
 I write dinosaur stories and
 draw pictures of dinosaurs.
 I like being in kinder garten!



THE PICTURE AND WRITING ABOVE COME FROM A KINDERGARTENER

Left, above: Elijah and Jasper learn about mushrooms with expert Lee Whitford



Left, below: Recording scientific observations

Learning about Mushrooms, continued from page 1

she helped start the Northwest Mushroom Association. Before the students went mushroom hunting, Lee told them all about looking for mushrooms. Then the students got buckets and went out to look for mushrooms. "I was not interested in mushrooms but when I went on the trip I became interested in them," says a kindergarten student. She now collects mushrooms and shows them to her mom.

After about an hour, the students all came to together and displayed their mushrooms on the tables in the classroom.

After displaying the mushrooms, the students started identifying them. They identified the mushrooms by smell (most of the mushrooms stank), the way the mushrooms looked, and the feel. Then they drew pictures of the mushrooms with the descriptions next to them.

Then, after all the mushroom fun, the students did Apple Day along with the grownups on Decatur. First, everyone ate and judged different apple desserts. Then they pressed apples and had contests. A few of the contests were smallest apple, weirdest apple, biggest apple, and who could make the longest apple peel. There was

also apples on a string: it was like bobbing for apples but in the air.



students have a mat that the robot travels on and Lego's challenges to solve with the robot's actions.

A robot needs to sense its environment and move while not hitting, falling, or breaking. The robot's sensors are the ultrasonic sensor (which sees the objects in front of the robot and how far away they are), the color sensor (which sees color, shades, and the brightness or darkness of light), the gyro sensor (which tells how the robot has turned in degrees), and the touch sensor (which tells if the robot has hit an object). There are also motors to move the robot.

When Randy Steele worked with the students he helped them think differently to make the programs. He taught the Shaw School students more about sensors, programming, and lining up the robots. For example, Randy said to the students that the gyro sensor would drift and think it was turning when it really wasn't. To fix this, students needed to unplug the gyro sensor and plug it back into the brick of the robot. The Shaw School students learned to save their programs so that the programs would not be deleted. Randy taught them about a programming block that does two motions. For example, in the program that students wrote named *Line Following*, the program needs a switch. The switch makes it so when the color sensor sees a dark color, the robot turns away from the color while moving forward.

When the color sensor sees a light color, the robot turns back to the line while going forward. This makes the robot follow the line, and, while doing this, the robot can turn on corners.

Randy at one point challenged the Shaw students to create a program for picking up a Lego-built bat and then dropping it on a tree—and then to take a Lego inspection drone and put it on a bridge. All of the students worked on different ways to get the bat on the branch. Some tried the *Line Following* program and some tried to write a measuring program to get the robot to drive up to the branch of the tree accurately. After two weeks, Jasper, one of the Shaw School students, with Diane the teacher, created a program that worked to get the bat on the tree and the drone on bridge. Jasper said, "I changed the attachment on the arm of the robot so that it would hook the branch. I also changed the setup so the robot had more of a specific line up and did not use sensors."

Randy with a student from Decatur, working out a program



Randy also brought drones and taught the students how to fly them. The first drone was the Parrot Drone. He brought four of these. The students worked together in pairs. There was the flyer and there was the instructor. The flyer flew the drone with an iPad that connected to the drone by bluetooth. The instructor told the drone flyer what to do by reading instructions off a paper Randy had given them. Four ways to fly the drone were named. There is the *throttle*, (to go up and down), the *yaw*, (to turn around in circles), the *pitch*, (to move forward and backward), and the *roll* (to move right or left). Afterwards, Randy gave the students another drone called the Tello-drone. The students did the same activities they did with the Parrot Drone on the Tello-drone—except the Tello-drone had real controls instead of iPad controls.

The students had a lot of fun and hope that Randy will come back to teach the students more.

water molecules get close together and join to form liquid water.

The students have also been learning about why it rains in some places and less in others. There is a fictional island called Ferris Island where there are two cities, East Ferris and West Ferris. East Ferris is having a water shortage and West Ferris is not. East Ferris and West Ferris are separated by a mountain. West Ferris is very green with plant life and East Ferris does

not have many plants. The students are trying to figure out why one city has a water shortage and the other does not. They will then figure out a way for East Ferris to understand their water problems.

The Shaw students are really enjoying learning about water and condensation and evaporation. At the end, the students will be designing a system to take fresh water out of salt water.



Elijah holding the desalination device he is engineering

students put the scenes on the columns to complete them.

Students also matched pictures of modern day objects with Roman objects. By doing this, they saw that Roman objects have influenced many modern day things. For example, there was a placard of a cobbled road and it was matched up with a picture of highway 66.

Also, the Shaw students are

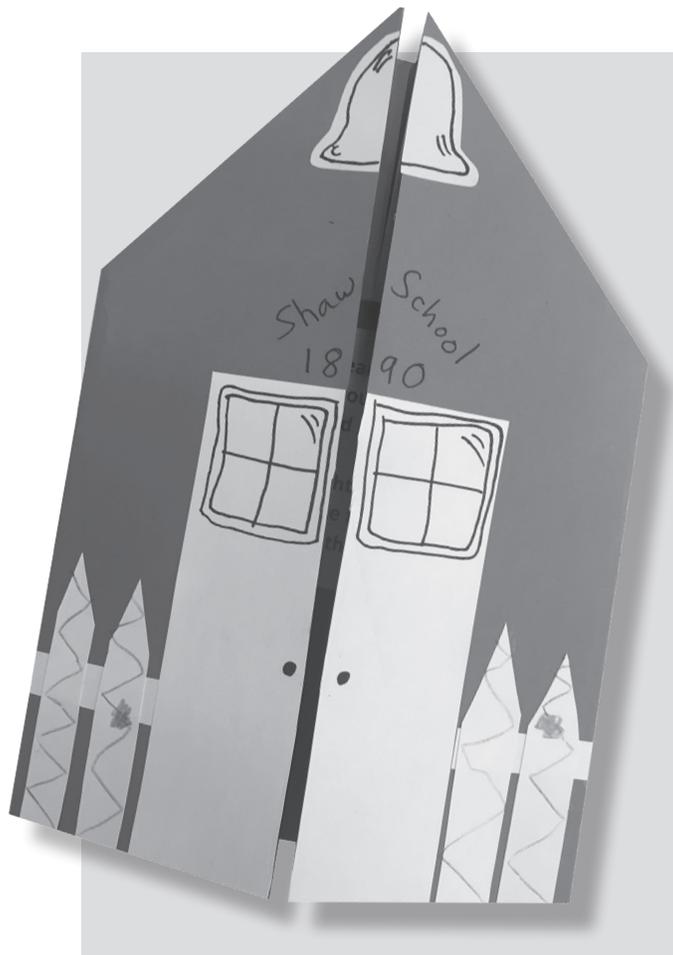
learning from a very informational online textbook. Did you know that Rome at its height spanned the whole Mediterranean world? It went all the way from northern Africa to the Scottish border. The students also learned that, about 300 years after its height, the entire western half of the Roman Empire crumbled and collapsed. It collapsed, in part, because Rome

had lots of different groups that disagreed about Roman laws, which led to many civil fights.

"I found it surprising that the Romans were able to conquer so many countries and own so much land," says Elijah, a student who loves social studies. The students have been learning a lot about Rome, and they look forward to learning even more.



CARTOON BY ELIJAH, SIXTH GRADE



Little Red Schoolhouse "Thinking of You" Cards

Shaw Island school has started a new program. To people nominated by community members, we send cards to brighten their day!

Do you know someone whose spirits need a lift? Someone who is ill, has lost a loved one, or is serving overseas in the military?

You can nominate someone to receive one of these cards, using the addresses below. When you send a nomination, please include the person's name and address, along with a brief explanation of why you are nominating them.

You can mail or email your nomination:

To mail your nomination, send it to *Shaw Island School, PO Box 426, Shaw Island, WA 98286*

To email your nomination, send it to *dclifton@shaw.k12.wa.us*

The Shaw School Foundation

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