

SEA Newsletter

October 2019

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How Robots Run Amazon

By: Cydney Macon

On September 30th, SEA held a field trip to the Amazon Fulfillment Center in Tracy. There, students saw how much robotics was utilized in an up and running warehouse. As many people would worry that robots are taking over traditional human jobs, the Amazon Fulfillment Center shows that the increase in robots increases the need of jobs for humans. In the warehouse, people worked alongside robots, such as in the stow process. In this process, the inventory was organized randomly, meaning that a laptop can be stowed next to a pair of sneakers. While some may find this extremely unorganized, this method actually lets stowers pick and choose what they need to pack. Stowers place the item into a yellow pod that a robot carries and stows the pod based on size, barcode, and which item has more importance. Another process that uses robotics includes picking orders. When an order comes in, a robot retrieves pods and carries them to the “pickers”. The pickers then take the item order and place it in a “tote”. Lastly, when a package is ready to be delivered, the SLAM machines (Scan, Label, Apply, and Manifest) weigh and measure the height of the package before placing a shipping label on it. This is to match the package with the original order.

The Amazon Fulfillment Center is a great opportunity for future engineers to see how machinery, such as robots, can make life at certain workplaces, like the warehouse, easier. It can maybe even influence how to make workplaces even more efficient in the future.

Highlights This Month!

Engineering Week!

Great job to everyone who participated in the dress up days and activities this year!

The Activity Winners are:

Duct Tape Design Challenge

Most practical Design: Manasvini Kala

Most Beautiful Design: Seemani Dash

Wackiest Design: Amol Gill

Paper Airplane Contest:

Matthew Leung & Qudsi Aljibiri

Robot Driving Challenge:

Matthew Leung & Jamey Farin

Stay tuned to see which class won a donut party for most spirit!

Academy T-Shirts and Hoodies

This year's new design is featured on both T-shirts (\$20) and hoodies (\$35)! The sales end on October 25, so get yours soon!

Order yours at

<https://www.customink.com/fundraising/whssea-shirts>



Introducing SEA Stickers

Check out our new SEA stickers!

These look great on your hydroflask or laptop! These will be sold until October 25, so don't wait too long! You can purchase them from Mr. Moehnke, Ms. Bynum, or an Academy Officer! Prices: 1 for \$3 or 2 for \$5!





Teacher Tea

By: Manasvini Kala

Get ready for a Q&A with your very own SEA teachers!

This edition: Ms. Haut (H) and Ms. Stewart (S)!

Q: Do you have any pets?

S: I do. I have 2 dogs, Ella and Apex. Ella is a Pitbull and Apex is a Pitbull German Shepard.

H: I do not. I had a 11-year-old yellow lab named Ronan. He passed away this past August.

Q: What is your most memorable experience in teaching over the years?

S: After 18 years, there are always a few. Seeing all my AVID kids graduate, that was [good] though. A student named James turned on the wrong gas valve and lit it on fire in Kimball.

H: I would say having a former student contact me letting me know that he kept his promise to me of including me in his acknowledgements. He completed his PhD dissertation and is now a professor at Yale. I think that is probably my most memorable experience.

Q: Do you have advice for any of the 4 classes?

S: Do your homework, show up on time, be prepared, try new things, go out for sports, join new clubs and what you do now will affect your future. Don't do drugs or alcohol, no underage shenanigans.

H: I agree with Mrs. Stewart. Really take advantage of the skills your teachers are giving you because you need them later on and no one will tell you how to do them.

Q: What is your ideal vacation and who would you take with you?

S: I want to go to Scotland and Alaska. I want to see the Aurora Borealis. I want to go fishing in Alaska to and catch some salmon. I would go with my husband, James; not my kids, not my dog, or Ms. Haut.

H: I would like to go back to the British Isles with my family.

Q: What do you both like to do in your free time?

S: Fix dinner, fix toilet, backyard, front yard, fix Dad's truck, clean the house, and fix dinner.

H: What free time? There is no free time. When I have free time, I enjoy baking and decorating cakes, "caking". I also like to paint.

Q: When you were in high school, did you know what major you would pursue? Did you ever think about being a teacher? And what college did you go to?

S: I wasn't really planning on going to college right away. I wanted to be a professional soccer player. I was going to be a teacher in 3rd grade for Special Ed. I went to San Jose State for the first 2 years and then went to Stanislaus State University. I received a B.S. (Bachelor in Science) in Biology with a minor in Chemistry, M.S. (Master's in Science) in Science Education, and a M.Ed. (Master's in Education) in Educational Leadership and School Development.

H: Growing up, I never really thought about being a teacher. I was Pre-Med. I wanted to be a pediatrician, but I stayed in kind of the same field. I went to CSU Stanislaus, UC Davis, and Teacher's College of San Joaquin. I received a B.S. in Biological Sciences, an M.S. in Animal

Science, and M. Ed in Educational Leadership and School Development. I also have minors in German, Chemistry, and a Concentration in Genetics.

Q: What is one topic in the world that currently interests you?

S: Climate Change

H: I don't know.

Q: Are you currently bingeing or watching any TV shows? If so, what show?

S: Unfortunately, no.

H: The last show I actually binge-watched was the Vampire Diaries and the Originals.

Q: What is your favorite movie and why?

S: My favorite movie is The Last of the Mohicans. I love the scenery and the soundtrack is good.

H: I like Highlander. It has good scenery, swords, and good music.

Q: Do you enjoy teaching? Why or why not?

S: Sure. I love molding young minds to be just like me! Kids are fun for the most part.

H: Yes! I like to share my love of biology with others and especially like it when my students enjoy it just as much as I do. Especially when they have the "Ah-ha" moment.

Q: What is your favorite subject to teach?

S: When I first started here, I wanted to teach Physical Science, but I like the math aspect in Chemistry.

H: Within biology, I like teaching biotechnology.

Q: Who are people that influenced you while you were in high school?

S: In high school, a big influence was my soccer team.

H: It was more my 5th and 6th grade science teacher. He taught all of the subjects, and I would say I got my love of science from him.

Homecoming Highlights

Our float-building team did a fantastic job on featuring Disney cartoon favorites!



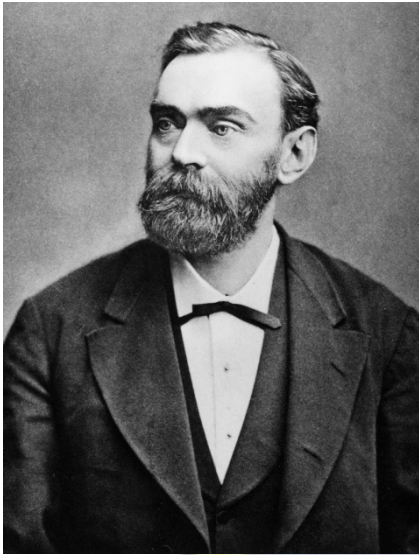
Our Disney-themed Homecoming float, built by Dalton young, Philip Ha, Brandon Lindner, Amrutha Kalle, Hadeel Abdul-Rehman, Simran Kaur, Fernanda Tapia, and Rhea Ramankutty.

Science Time!

Check out some cool things about scientists, new discoveries, experiments, and more in this section!

Scientist of the Month: Alfred Nobel

By: *Aria Jacinto*



You may know Alfred Nobel for being the founder of the Nobel Prize, but did you know that he was also a venerated engineer, chemist, and inventor? Nobel was born on October 21, 1833 in Stockholm, Sweden where his father taught him the principles of explosives at a young age. After his younger brother was killed by an explosion in 1864, Nobel invented dynamite as a safer form of explosive. He went on to patent a total of 335 inventions. With his huge fortune, he instituted the Nobel Prizes to honor achievements in chemistry, physics, literature, medicine, and for working toward peace. Each recipient of the prize is given a gold medal, a diploma, and a sum of money.

This month, let's remember Nobel as not only the founder of the Nobel Prize, but also as the incredible engineer that he was. Happy birthday Nobel!

The Future of the Meat Industry

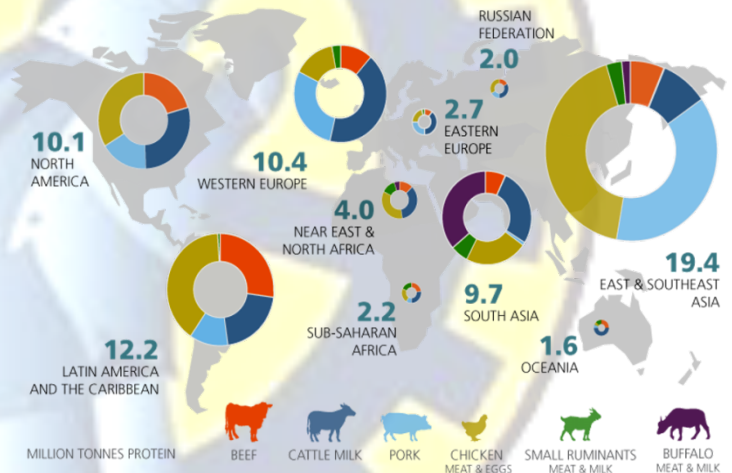
By: *Reuven Villanueva*

It's no secret that meat plays a big role in most of the population's everyday life. Whether you go downtown, make a quick gas stop, or maybe even just walk a few blocks from your own home, you'll find many places selling food that has meat in it – most specifically, beef. McDonalds? Panda Express? In-N-Out? You'll almost always be able to find a place where cow is in heavy demand.

I'm not going to lie; beef is pretty good. However, there's a side to it that isn't so appetizing. Because of its heavy demand, cows are farmed in mass, and people have found ways to farm them more efficiently without a second thought about its impact on the environment.

Global warming is a very hot topic right now; millions of people are fighting against it, worrying about the future of our world. You may be wondering, "How does this tie into the meat industry?" The UN's Food and Agriculture Organization found that around 15% of the world's global green house emissions are due to livestock – that is the farming of animals. This problem has seemingly gone unaddressed for quite some time, but about a decade ago, companies like Impossible Foods and Beyond Meat were founded to tackle this problem. Their objective was to find a viable plant-based meat alternative that could satisfy meat-eaters and vegetarians alike.

Recently, Impossible Foods took initiative and started distributing out their product. The Impossible "meat" began selling in restaurants such as Burger King and Red Robin. Impossible Foods is hoping that it'll be available nation-wide in most grocery stores by 2020. This burger is a big step towards the right direction, towards a greener, healthier earth. Regardless of your food preferences, plant-based meats are going to make a huge impact on the world going forward.



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Senior Corner

By: Philip Ha

Important Upcoming Dates for Seniors:

- October 1: Start of FAFSA Filing Period
- October 5: October SAT
- October 26: October ACT (Deadline: September 20)
- November 1: Start of Fall 2020 UC Admission Application Period
- November 2: November SAT (Deadline: October 3)
- November 30th: End of UC Application Filing Period
- December 7: December SAT (Deadline: November 8)
- December 14: December ACT (Deadline: November 8)

Don't let senioritis hit you quite yet! Good luck seniors!

Editor's Note

We're consistently trying to improve our program's newsletter, so send us your thoughts! Is there anything more you'd like to see? What questions would you like to see our teachers answer next? And most importantly, are you interested in writing for the newsletter? Let us know on any of our social media!