

Mecha Mules News

Quarterly Issue 4 Part 1-July 2023

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International Champions

By Peter Vik-Driver





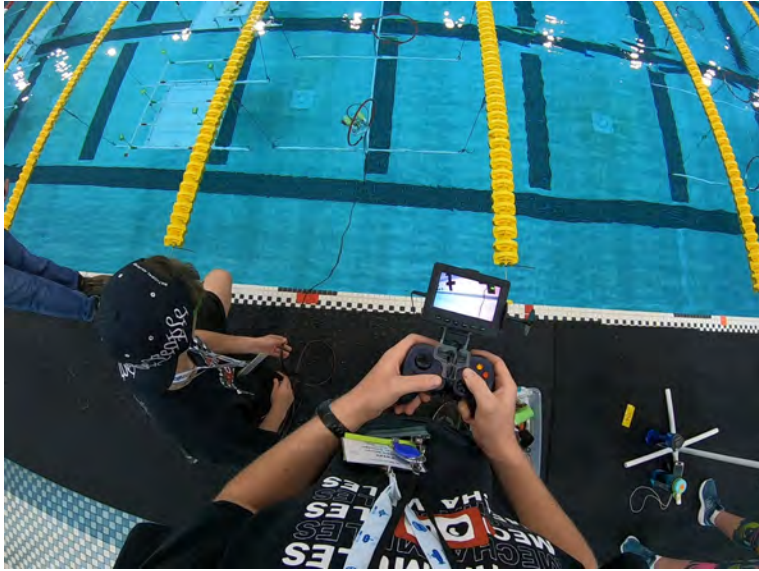
The day before the competition was fairly relaxing. We hung out in the hotel and found a local pool to swim in. In the afternoon we checked our team in at the University of Maryland. The ROV was inspected and cleared.

The next day we had breakfast in the hotel dining room. We packed up the ROV gear and headed over to the university where we unpacked at our table. Our runtime was after lunch so we went to study the dry courses in the gym while we waited. Two hoops on the obstacle course were changed from what we had practiced on. We checked out other teams' ROV designs and Seaperch provided lunch.



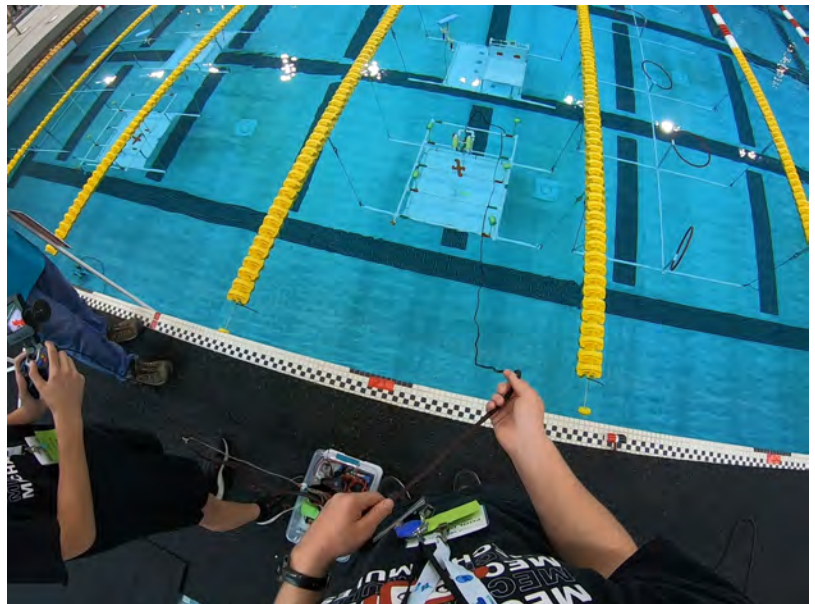
After lunch we collected our gear and headed down to the pool deck. At each station, the courses were hanging side by side in the water. We were led to a station and the 20 minute timer started ticking.

Nathan asked the judge a couple questions while I set up the ROV for the obstacle course.

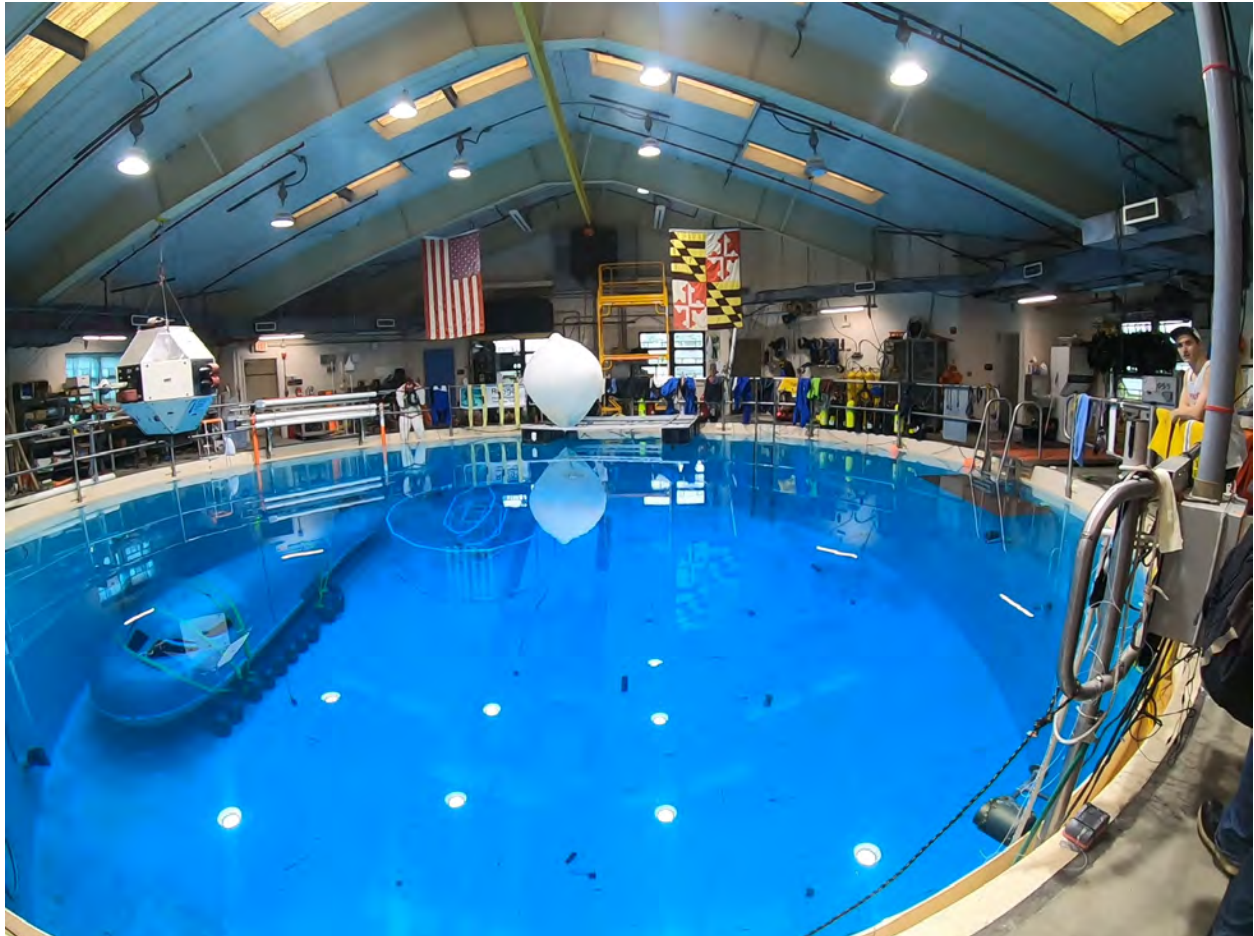


I set it in the water and the countdown started. The changes to the course made it mostly unfamiliar but the concept stayed the same. I maneuvered the ROV the best I could during both runs and the best time was 48 seconds.

Nathan pulled the ROV out of the water and unfolded the hook into “mission mode” for the mission course. The ROV was dropped in and the countdown started once again. Nathan ran the course fluently due to the hours of practice. It appeared that we were going to get a 3 minute time when the Octopus slipped off the hook and into the abyss. He finished the course with a time of 3:44. It was a great time but losing that octopus meant we didn't get the bonus points.



Nathan and I both knew that these were not our best times nor scores. We figured that the times might make us 2nd or 3rd overall. As we walked off the pool deck we were greeted by our teammates. They congratulated us on the times as we complained about what we could have done better.



There were several hours between our runs and the awards ceremony. During that time we toured the Neutral Buoyancy Research Facility at the university. It had a deep pool to simulate the neutral buoyancy of space. They had several projects old and new to see and it was very cool to tour. Afterwards we went back to the competition building where a game of basketball was starting. Kids from various robotics teams joined in on the fun as time passed along. Later the game was interrupted by the announcement that the awards were not going to be given in the gym like last year. Instead they were to be given in the giant, echoey pool room. The audio was almost inaudible and even the sign language translator was having trouble deciphering it. The whole thing would have been botched if it wasn't for the big screen on the wall showing the award, team number, and team name. Nathan later said that he was "counting cards". When we got first place for writing and video he prepared his phone for the overall awards. Everyone

was hyped because of the trophies we had just won. As the overall open class champions were announced everyone was tense with anticipation.



Nathan started “rolling film” as we leaped to our feet with excitement. We had done it, everything we had worked for this season came true! One or two screams of delight shot through our section. Everyone started exiting after the closing. We took a moment to gather ourselves and went to get the big trophy. There was a big line for team pictures but we had just received “VIP” status and we were able to cut it. We later celebrated further by going bowling and hitting the sack in the later evening hours.

April-June



SkillsUSA State Competition

By Reagen Hoogendoorn-Writer

Two students, Cor Hoogendoorn and Reagen Hoogendoorn, went to state for the SkillsUSA Mobile Robotics Competition. It took place in Tacoma where they competed against other teams from various areas of the state. They participated in the competition and went through two presentations, one on their journal and the other going through the robot's program. They would place third in the state.

WHS 3rd Quarter Awards Assembly

By Alan Smith-Programmer

This picture was taken at our 3rd quarter awards ceremony by Principal Leitz. A few members of our Seaperch team received an award. The Neptune Award! A member of our community, who helped start this entire program over a year and a half ago in October of 2021, Ron Kimmel had an award made for the first place local qualifier to the International Seaperch Competition.





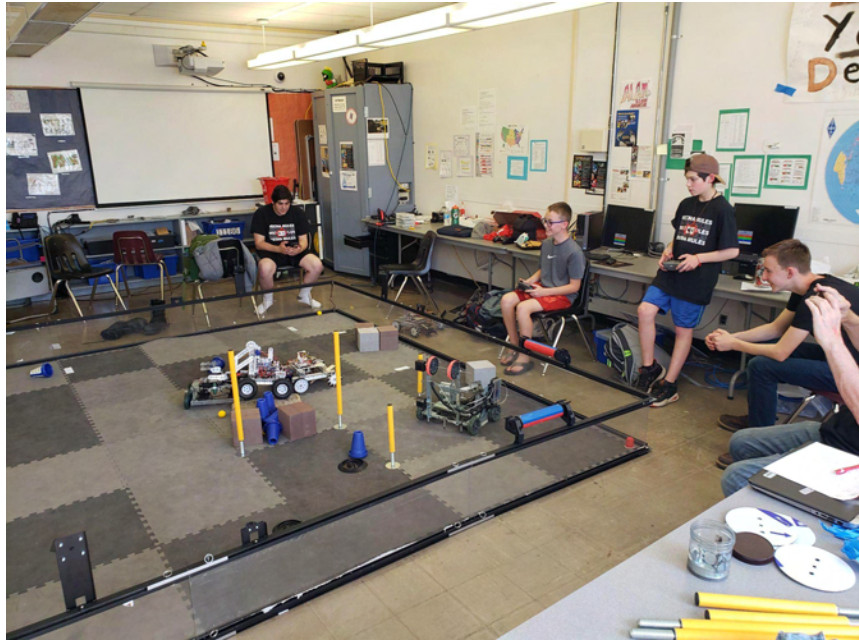
Spring Fundraisers

Car Wash

By Annelise Vik- Video Editor

Fundraisers are where we get most of our funds to go on these kinds of trips. We had a carwash last year that brought in \$2,000 dollars and \$0.11 cents. We didn't know what to expect at first so this was a huge deal. This year, the carwash brought in \$2,500 dollars from the community after washing 71 cars. URS Electronics in Portland offered to match up to \$2,500. So we ended up getting a grand total of \$5,000!!! We would like to thank the community for all of your support! We could've done it without you.

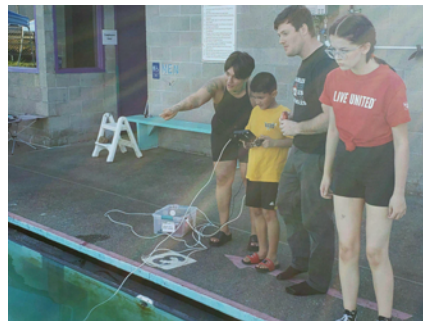




Robot Expo

By Annelise Vik-Video Editor

While brainstorming for fundraising, we came up with a lot of great ideas, but we couldn't do all of them. So, why not do them all in one? AN EXPO! We had Duct Tape the Drivers, land demonstrations, water demonstrations, concessions, guess the gears in the jar, and probably more that I can't think of right now. We didn't get very many customers, but we still had fun.



Duct Taping the Drivers definitely was a fun one. We taped Nathan, Jamey, and Juan. Juan wasn't originally part of the plan but he substituted in for Peter (who Knows how much tape it would take to hold him up). We made about \$450 at our Expo.



Lincoln Memorial

Trip to the DC

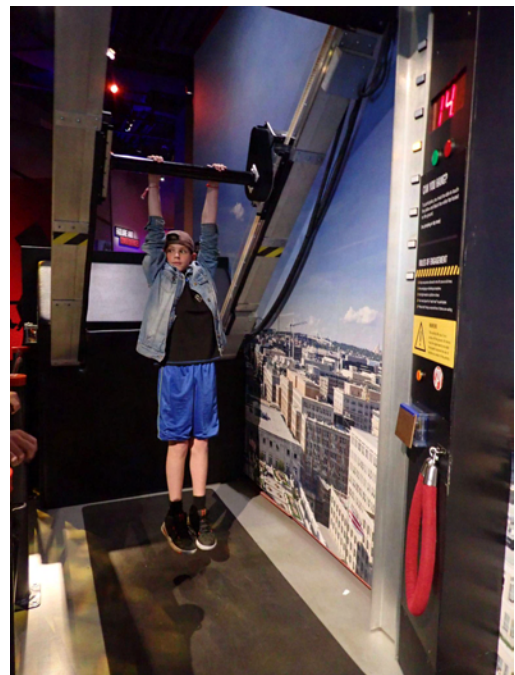
By Jamey Heston-Jack of All Trades Jr.

We went into the heart of Washington DC on day three to look at what this big city had to offer. The first thing that we did was go to the International Spy Museum. My favorite part was the hanging bar which simulated hanging from the side of a building.

This was fun because it was a part of the game in the whole museum simulation. The museum also had lots of historic things about spies and things of that nature. We had some lunch at a pavilion in a park across from one of the Smithsonianians.



Spy camera in a tie.



Next, we went to the famous Ford's Theater where we got to explore the very inconspicuous museum with hundreds of artifacts. The best part was obviously going into the theater and seeing it in full. My favorite part was that the names of the people that were sitting in the seats at the time that Abraham Lincoln was shot, were engraved into the very seats.



Then we went to an old post office tower that had the second best view in DC, apart from the Washington monument.



After that, we went to dinner at a restaurant called Founding Farmers, where they had everything from burgers and hotdogs to chicken salads and homemade sodas. Lastly, we went to the Lincoln Memorial and soaked it up. It was much busier than last year so it was like a whole new experience.



When we got back to the hotel that night, we did some team bonding by playing cards and games. I'm so glad we got to spend even more time in Washington DC this year because there is just so much to see!



WHS Senior Showcase and Rook Retires

By Jessica Vik-Video Mentor

Alan Smith

Alan Smith moved here last year from Arizona. He joined robotics as the SeaPerch season started. Here he discovered a love for programming over his first year in robotics at WHS. Bringing new ideas and designs “to life” is what Alan likes most about robotics. Each competition starts with brainstorming and designing. Sometimes, like over the last year, the team has had placings to be proud of.

During the First Tech Challenge (FTC) season this year, there were two different robots used. One was H-Drive which was an idea that Alan had. This robot was the competition robot when they competed at state in January. Alan had a chance to be Field Captain for one round and got to see H-Drive up close during competition. This was a moment he won't forget.

“I have learned to say yes more,” Alan said. Saying yes to robotics helped him find a career path during his senior year. After graduation, he plans to take a game design course and then enroll at Lower Columbia College (LCC) for the spring quarter. He will be studying computer programming and hopes to own his own game studio someday.

Robotics has given Alan more stability and helped him to be a better decision maker. He hopes to come back and mentor the Mecha Mules in the future. Joining robotics is more than just robots. There is writing, video, programming, organizing, public speaking, building, engineering, ect... “No matter what you want to learn, there is something for everyone,” Alan commented.

Alan is the son of David and Shannon of Arizona. He lives with his grandparents, Chuck and Joyce of Cathlamet, WA.



Micah Johnson

Micah Johnson is a homeschooler participating in Wahkiakum High School (WHS) robotics. He started robotics in 2015 through the 4-H robotics club. When he got older he joined the WHS robotics club. He has been active in robotics for about five years.

His favorite part of the club is the community and fellowship it offers. The chance to learn from others while hoping he can teach others at the same time is a highlight of being a part of this team. Making memories at a state and international level are memories Micah won't forget.

Through being involved with robotics, Micah has learned the value of teamwork and others opinions. There is always something to learn and he hopes to carry this into his next chapter in life. After graduation, he plans to work and stay local; saving money. Eventually he plans to move to Seattle, WA to become a pipefitter apprentice. He would love to become a Mecha Mule mentor one day.

Micah is the son of Earl and Betty Johnson of Rosburg, Wa.



Elijah Thompson

Elijah has been involved in robotics for two years. When asked what his favorite part about it was he replied, "I got to meet lots of new people." The past two years, the Mecha Mules have gone to state twice and internationals twice. The opportunity to meet people from all over Washington State and then from all over the world was a neat experience.

The trip to DC also holds his best memories. Elijah enjoyed seeing all the monuments when he traveled there with the team for the 2022 International SeaPerch Competition. His mentor Ron Wright has shown by example that no matter what age you are, robotics will always be fun!

After graduation Elijah plans to go to LCC for the diesel mechanics program. Getting a CDL, he then plans to go to West Coast Training to learn how to operate heavy equipment. The robotics program played a role in what he did after high school. He learned he was a hands-on type of guy, being a builder for the team. He hopes to get involved in robotics at LCC.

Elijah is the son of Angelina Batchelor. He lives with his grandmother, Linda DeHart of Skamokawa, WA.



Jeff Rooklidge Retired

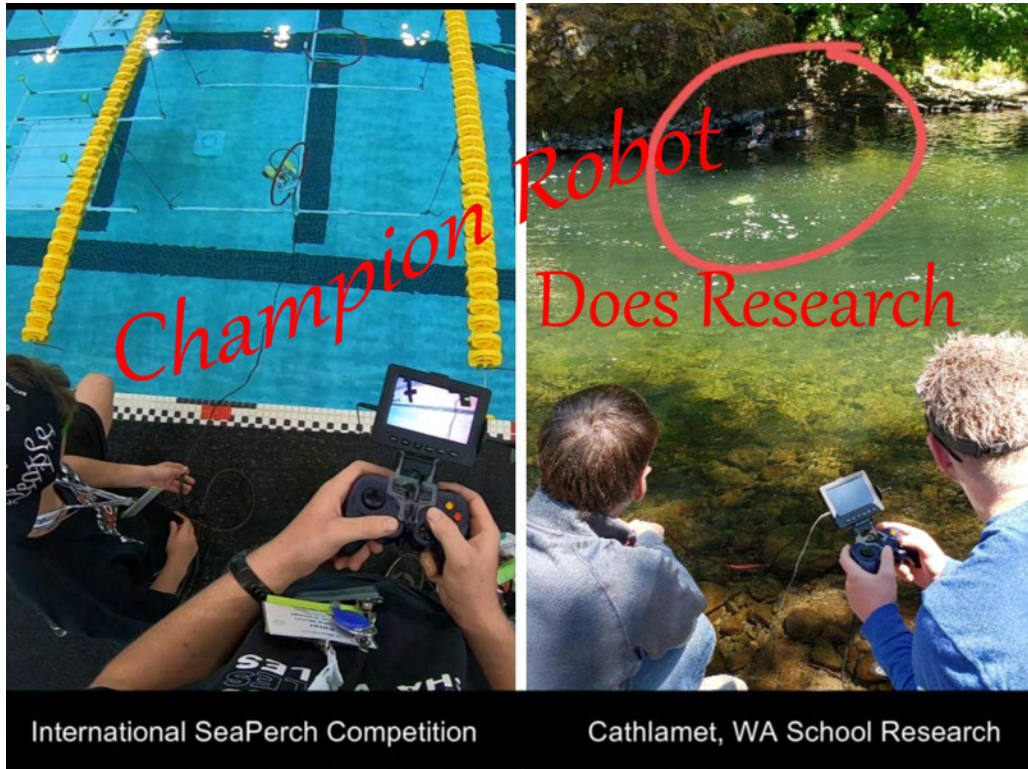
Jeff Rooklidge has been a teacher at WHS for 37 years. Graduating high school in 1980 from R.A. Long in Longview, WA, he went to the University of Puget Sound. Career choices on his mind were physical therapy and teaching. As he helped his brother's baseball team he discovered he loved helping kids set goals. He decided to go for his teaching degree with the idea that he could combine his love for sports with the love of helping kids set goals for their future. Rook (as students and teachers alike call him) graduated in 1985. He was hired in 1986 at WHS and has never taught anywhere else. Rook has taught chemistry, biology, engineering via robotics, environmental science, and physical science. As well as coaching volleyball, baseball, and robotics.

Technology has been the biggest change in his teaching career. "Back in the day" kids were excited to do field work to get out of paperwork. Now every kid has a chrome book to do school work on and the hands-on learning desire has dwindled. Most kids have phones in the classroom which can be a distraction that wasn't around when he started teaching.

On the flip side, these kids are resilient and inspiring to Rook. When things get tough, kids push through. He has learned kids like to be challenged. Robotics is a class that is naturally hard and it pushes them and they love it. "The best thing I've learned is to embrace life when it gets hard; learn and grow from it." said Rook.

When you put your whole career in one school, a person forms lasting friendships that will be missed. "We have something special in Wahkiakum. The general community steps up to help our kids and that is something Longview schools don't have." Rook stated.

Jeff would like to express his gratitude to the WHS robotics family he has been a part of and to Ron Wright, his mentor, who has taught him so much. If you talk to Rook long, you can hear how much he loves his wife. They plan to do some traveling and spend time with their children and grandchildren. Rook plans to continue his hobbies of gardening and backpacking, while learning a new one - fly fishing.



Video Links

Jessica Vik-Video Mentor

Biology Meets Robotics

A few students from the Wahkiakum High School Robotics team took their winning robot from the SeaPerch competition to the Elochoman River to see how well it would work in field studies. The goal was to find out if the SeaPerch robot would be a helpful tool in combination with live student snorkel divers for collecting Biological data in the Elochoman River. Their teacher said, "The answer was a resounding yes!" This is spawning grounds for the pikeminnow and they hoped to catch a glimpse of some while answering this question. Rook's Biology class already comes to this swimming hole to study native Signal Crayfish (*Pacifiasticus leniusculus*). They have hotdogs in a trap, and they are on the watch for Red Swamp Crayfish (*Procambarus clarkii*) which is an invasive species. Thankfully they haven't found any of them yet.

This link will share with you their experience and what they found underwater in the Elochoman River. <https://youtu.be/b8Z3HcBeOfQ>



Congresswoman Makes a Splash For The Mules

The evening of June 29, 2023, Congresswoman Marie Gluesenkamp Perez (3rd District, Washington) came to Cathlamet to make good on a promise she made to the Mecha Mules. She had come to town during the thick of SeaPerch season and before leaving she had agreed to jump in the pool if they won. Not only did they win 1st at the qualifier but they won 1st at Internationals too.

This link <https://youtu.be/XX0hSK9YtIE> shares the evening where she made a splash for the Mules!



Coaches Corner



A Memorable SeaPerch Season

By Amanda Heston, Mecha Mules-Water Damage Coach

Mindset. That is what I talked to my team about before the International Seaperch competition. It was a tall order to improve upon last year's title of 2nd in the world in the Open Class division. There is only one step higher: first place. We had to mentally prepare ourselves for the possibility of stiffer competition and the unpredictable element of luck. You get one shot at the mission course and two at the obstacle. That is a lot of pressure on our drivers, especially at the international level.

Luckily, we don't measure our worth and achievements on scores alone. The team made improvements across the board this year, from the pool courses to the video and technical document. Peter Vik, the driver for the obstacle course and Nathan Garrett, the driver for the mission course, both improved their scores and times from last year's competition. Regardless of their busy schedules with school, work, and other activities, they put in the time to practice in the rain, snow, wind, green water, hazy water, and late into the evening. I stood there with them at every practice, sometimes watching from in the pool, and saw them hone their skills, sharing their excitement as their speed and precision improved. To join them on the pool deck at internationals was such an honor.

Annelise Vik was the award-winning videographer this year. She assisted last year, but this season she really stepped up and put in the time and effort required to make a stellar video. Not only did she document our improvements in building and design, but she captured the dynamics and personality of our team: we work hard, but like to have a lot of fun, too. Arwynn Haney was the lead writer for the award-winning technical document. Her writing this year was the best I've seen from her and she set goals for herself from the get-go. She worked with the team to get the best data possible to make a world-class document. The other members of the team, Jamey Heston, Elijah Thompson, Micah Johnson, and Alan Smith all improved in their respective jobs.

We could not succeed without each other. Every person on the team and every mentor and coach contributed to our success. The team bonding was certainly a highlight on the trip.



The touring of Washington DC was enjoyable and educational and the team enjoyed showing Jeff Rooklidge and Josh Miller the Lincoln Memorial. Neither had been to DC before so we looked forward to seeing their reaction as they approached that great monument. It was quite fitting for an underwater robotics team to spend our bonding time at the pool the day before the competition. What a treat it was to get into a heated pool without waders on! To see the kids smiling and laughing together as they launched each other up out of the water took teamwork and communication, all while having a blast. However, nothing can quite top those moments as we sat together at the awards ceremony.

The shock and excitement we felt after each of our awards were announced was palpable and something I will never forget. We literally felt like we were on top of the world! I'll never forget our 2023 Seaperch team and everything we accomplished together. In a few short months, we'll be at it again!





New Communications

By Ron Wright, Skills USA Coach and Robotic Tech Club Advisor

Hello folks, A few more big happenings, in this article will talk about those at the coach-advisor level: new communications tools we are using, competitions in the upcoming school year, coaching and mentoring decisions for the upcoming year, and our restructured donation program..

Mentor Brian Heston created our new website complete with our own domain name and associated email address.

Our website:

<https://www.mechamules.com/>

You will find all the info about us, including links to current teams, history, competitions, newsletters, videos, sponsors, links to Eagle articles, etc. Our website is linked from the Wahkiakum School District website.

Our email address for all things Mecha Mules:

info@mechamules.com

Several coaches and mentors monitor this email address so you should expect a response within a day for anything sent to it. Most of our communications to our supporters will come via this email address. Coaches will also still be exchanging info with team members and their parents using their personal email addresses, or via team-specific text message groups.

This upcoming school year (2023-2024) we will not participate in FIRST Tech Challenge (FTC) due to lack of bandwidth in coaching and student interest.

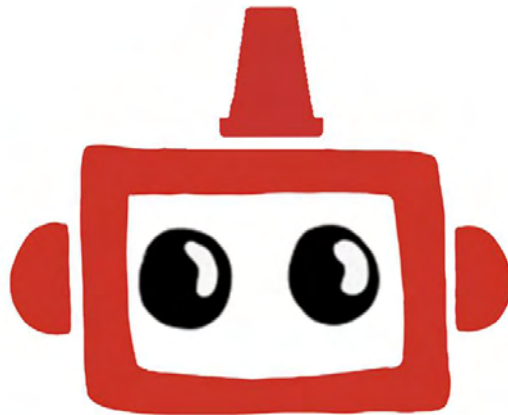
We will participate in SeaPerch again in the winter-spring. We will of course be defending our World Championship ranking (it still brings moisture to the eyes to say that), with several returning two-year veterans and plenty of ideas to build an even better robot (some students are already working on their ideas). Our three recently graduated SeaPerch seniors (Micah, Elijah and Alan) also hope to be available to assist with mentoring. We will likely again also have one or two teams from MS, and maybe a "jv" high school team. The date set for the Cathlamet Qualifier is two weeks earlier than this past year: Friday March 15, 2024. This will allow the winning team(s) more time to register for Internationals. We are working on making the experience at the Cathlamet Pool more comfortable for participants and volunteers. Let me know if you can get involved with that work.

We will also participate in a few events in SkillsUSA: Mobile Robotics Tech (MRT) , Robotics Automation Tech (RAT), and possibly a few others from the list of 80 possible events. Students are already working this summer on robots for those first two events. The regional competitions can happen anytime from mid-December to late January. State will be in early February. The tentative regional date for both MRT and RAT is Wednesday December 13. Because MRT uses the exact same robots and rules as VEX we may also enter that competition in the fall.

Our Mecha Mules Club will also support the KM Cup - a competition among first-year robotics students only - to determine who can best solve the robot object-moving and sumo-wrestling team challenge. We hold it once per semester, with the approved dates for this next year as: January 20 and June 7.

Our Coaching and Mentoring current status. Amanda has agreed to return as our SeaPerch Team head coach. We are looking for SeaPerch assistant coaches to lead other possible teams. I will likely serve as SkillsUSA head coach, and I am looking for an assistant coach for each of the events we choose to enter. Continuing on as Mentors available to assist coaches with most any competition will be: Amanda Heston with logistics and teamwork, Brian Heston with coding and communications, Steve Hart and Mark Sutton with building and wiring, Ron Wright with visioning and coding, Marjorie Watkins with team morale, Jessica Vik with video, Paula Culbertson with report writing, and Jeff Rooklidge with design and planning. New mentors beginning this fall that we know of so far are: Kaitlyn Kincaid in coding, and Paul Lawrence in 3d modeling, printing, and cutting. We especially need a mentor in robotics design from the professional world. We welcome more mentors in every area. As we continue to improve and expand our offerings for students we need more mentors so that no one mentor is overwhelmed. Let us know at info@mechamules.com if you are interested in joining our team as a Mentor.

Finally, we have restructured our donation program. We will continue with our t-shirt fundraiser in the fall, our carwash fundraiser and our RoboExpo fundraisers in the spring. New this past spring is our Sponsorship program: for added recognition to sponsors we have our "Mecha Mules Sponsorship Drive" beginning in the late spring and ending in the early fall. To be recognized as one of our sponsors, a business or organization is asked to commit for five years at \$100 per year, or more. There are three levels: 100-499, 500-999, 1000+. We are still deciding on Mecha Mule related names for each of these levels. Send me your suggestions. We are also looking into an ongoing online fundraiser since we heard this spring that relatives from far away were looking for an easier way to donate than writing and mailing a check to "Wahkiakum ASB, memo: Mecha Mules". Let us know at info@mechamules.com if you are interested in joining our team as a Donor or Sponsor.



Donations can be made to: "Wahkiakum ASB" Memo: Mecha Mules
Wahkiakum School District
500 S 3rd St./P.O. Box 398
Cathlamet, WA 98612

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