Team Members (left to right) | Grade | Title | New/Returning | Career Goal
---|---|---|---|---
Ava Cannold | 9 | Chief Operations Officer | New | Civil Lawyer
Lena Kalandjian | 9 | Electronics Assembly/Soldering | Returning | Pediatrician
Bobbi-Jo Suppelsa | 9 | Chief Executive Officer | Returning | Biomedical Engineer
Kylee Vest | 9 | General Robot Assembly | Returning | Marine Biologist
Madison McEwen | 11 | Chief Financing Officer/Software Programming | New | Biomedical Engineer

Team Mentors (left to right) | Position | New/Returning
---|---|---
Steven Craw | High School Instructor | Returning
Tony Suppelsa | Motorola Solutions Foundations Sponsor | Returning

Team Information:
- Company Name: H2Obots
- First Middle School Team in 2018
- Returning: Second Year participating in MATE Robotics
  - Competed at FAU regionals, 2018
  - Invited to compete in Kingsport, Tennessee regional competition
- School: North Broward Preparatory School
- Location: 7600 Lyons Road, Coconut Creek, FL 33073
- Distance Traveled: 9.5 miles

Company Theme:
- Girls Advancement in Science, Technology, Engineering, Arts and Math (STEAM)

ROV Specifications:
- Estimated Total Cost: $1408 (100% Donated)
- Dimensions: 31 cm x 38 cm x 47 cm
- Total Weight: 15.40 kg
- Tether Length ~ 10 Meters
- Primary Material: PVC
- Total Student Hours: 160 Hours spent building/designing
- 16 hours spent practicing

System Design Features:
- MATE Triggerfish Kit
- Interchangeable positioning mechanical claw
- Multi-view camera setup
- 4 Thrusters: 2 Vertical, 2 Horizontal
- Mini-Rov - 1 Camera, 1 Motor, 3D printed with flashlight at tip
- 5 Wide Area Cameras
- 2 Sabertooth 2X5 Motor Controllers
- 2 Sets Bags used for lifting function
- Electromagnets to hold Mini-Sub
- PVC Tubing Frame and Fittings
- Max Fuse Size = 25A (20A * 150% = 30A -- FULL LOAD) - 25A inline fuse to operate functions at separate times

Safety Features:
- On/Off Switch on Control Box
- No Exposed Wires
- Two in line fuses; One on the power supply and the other in the control box
- Separate Fuse (3A) for cameras
- GFI breaker for power source (MATE kit - yellow plug)
- Strain relief on control box and on ROV
- Propeller cages (Shrouds)
- Safety Procedures/Checklist Created

Built vs Bought:
- Built
  - All 3D-printed components (reel, mini-sub & holder, fish drop, propeller guards)
- Bought
  - Triggerfish kit from MATE
  - Building materials
  - PVC frame
  - Magnets (Amazon)
  - PVC Pipe and Fitting

New Vs Used:
- Reused frame design from last year -- everything else new