Helpful Tips on Managing and Sustaining a FIRST Robotics Program

Team 359-Hawaiian Kids CMP Presentation Abstract
April 25, 2012 Workshop 6:00-7:00pm

Presented by: Glenn Lee, Lead Teacher, Mentor and Coordinator
Jandie Sabo-Documentation Student Leader 12th Grade
Megan Andrade-Documentation Student 8th Grade

Handout Materials: PowerPoint Outline, Program Outline, Sample STEM-Robotics Legislative Bills, 2011 Championship Chairman’s Award Video (3 minutes), Sample NASA Grant Proposal Writeup, Sample Donation Letter/Thank You Letter

Description/Details of Workshop:

Team 359 – The Hawaiian Kids would like to do a PowerPoint and video presentation on Program Management and Sustainability for interested FIRST Robotics teams. Specifically, we would like to do a 1 hour Presentation, show our 3 minute 2011 Chairman’s Award Video, describe the importance and impact of FIRST and the affected culture of our school community, provide handouts, and allow for questions at the end.

The approach would be to focus on how our program is established within the school, community and the partnerships established with businesses, sponsors, mentors, and government. Our team would share about our program history, including the many challenges that our team is faced with and how we address those issues with both short and long term goals. We have lots of meaningful experiences to share and how we were both successful and unsuccessful in addressing those specific challenges along the way. Fundraising ideas and sustainability will be discussed in detail, including links to possible funding sources for teams to explore. Past Hawaii legislative bills will be shared that lead up to State-wide support of the STEM and Robotics initiatives. In addition, interested teams will get to see several of our grant proposals, which will be dissected and discussed on how we were able to successfully receive support for our facilities, equipment and renovation efforts at our school.

In summary, the purpose of the presentation is to help teams address the most common challenges in managing and sustaining a FIRST Robotics program.
Helpful Tips on Managing and Sustaining A FIRST Robotics Program

Presented by:
- Glenn Lee
  - Robotics Teacher (1999-present) and Coordinator (2003-present) - CTE Industrial Technology Engineering Career Pathway, Waiakea High & Intermediate Schools (Hilo, HI)
  - Learning Center and Career Technology Education (CTE) Coordinator, Intended Learning Opportunity (ILO) Project Director, School Technology Cadre and Leadership Team.
  - B.S. In Electrical Engineering, minor in Math, M.B.A., Teaching Certificate in Secondary Education.

Who We Were

- Hawaiian Kids story---
  - Rookie Year 2000
  - Mentored by Team 254, the Cheesy Poofs
  - 2 engineering mentors, 5 teachers, 1 coordinator
  - Afterschool club only
  - Sole funding sources - Fundraising and donations
  - Attended 1 regional in San Jose, CA - Silicon Valley Regional
  - 18 students

Who We Are Today

Hawaiian Kids story---

- Participation in the 1st Season is 15 years
- Mentored other Rookie Teams in the past (Punahou Schools, Sacred Hearts Academy, Nanakuli HS, Mililani HS, Farrington HS, Pearl City HS, Nanakuli HS, Waiakea HS, and many other HI teams)
- Collaborated with many FIRST Teams around the U.S. (W.I.C.S.)
- Array of mentors, former students, teachers, parents, and other volunteers.
- Programs supported by Industry; Technology; and Engineering (ITTE) and ArtoCom Systems Career Awareness Pathways both during and after school.
- Funding sources: fundraising, donations, partnerships, Title I/IV afterschool programs grants, EDC Grant, FP grant, CTE Carl Perkins and the Hawaii State Learning Center; Hawaii Legislative Funding Act 111, other various mini-grants. Consistently attend 3 regionals and 2 Championship Competitions (ILO and FRC).
- 15-35 students
- Established FTC, FLL, and VEX programs/competitions under the "Waiakea Robotics Team."

**Robotics Course Sequence:**

Documentation:
- TAC32010 Arts/Communications Core
- TAC2126 or TAG2216
- TAK2930
- TAK2990

Construction:
- TIC5010 ITE Core
- TIN5210
- TIK5930
- TIK5900

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A few ideas on How to Raise Funds to Support your Program

- Basic Fundraising. i.e. discount cards, bake sale, restaurant certificates, Krispy Kreme, etc.
- Donation. Write Letter of Request and Thank You if donation is made.
- Partnership. Establish a relationship between you and a Potential Donor. Goods, services in exchange for funding and/or in-kind donations such as robot parts, labor, meals, etc.
- Grant Writing: Mini, Local, District, Statewide grants that serve a range of programs from robotics to bigger STEM initiatives.

Budget: Expenses, Fees, Hidden Cost

- Create a budget plan to meet the goals of participating in FIRST competitions.
- i.e. Registration fees, travel, robot parts including spares, robot materials (metal, fasteners, playing field), team uniforms, tools, housing and meals if traveling to an event outside the State.
- Budget should include expenses to participate in team, outreach activities, and public events.
- Have contingency plans in case funding/facilities become an issue.
- Address sustainability issues for future events/seasons.
- What about next season? What happens if your robot needs to be fixed after an event?

Raising Awareness in the Community

- Brochures / Pamphlets
  - Provide tangible source of information – not just words.
- Fundraisers
  - Look at it not just as an opportunity to make money, but a partnership to get the word out and provide a service to the community.
  - Display your “robot and your program”
- Work with other state departments - e.g., DIBEDT - for something that benefits the Innovation Initiative in Hawaii
- Mentors/Volunteers - don’t turn down any assistance offered
Media

Interviews – Say “YES!”
➢ Students’ opportunity to shine
  Internet Publication
➢ Website

FIRST exposure

FIRST hierarchy
➢ Woody, Dave & Dave
➢ Competition staff
  In line to Judges/Staff/Gam
➢ Other Teams
  Offer assistance
  Collaborate and familiarize yourself with as much teams as possible
➢ Regional chapters
  Hawaii FIRST Regional Planning Committee (RPRC)
  President of Hawaii Robotics

Waialua Team 359 2011 –
Waialua Robotics Team
Championship Chairman’s
Award Winning Video

A summary of our robotics program–present day.

Recap (from our perspective)...........

➢ Managing a team involves the support of more than one or a few teachers.
  • Mentors, volunteers, and former students play a key role.
  • Having robust support in place is vital.
➢ A team/school cannot sustain the costs of a FIRST Robotics program by
  fundraising alone.
  • Acquiring grants, establishing partnerships, and other sources of
    funding will help you reach your long-term goals.
  • Establish a clear organizational structure and a robust program of study.
    • Having clear goals, roles and responsibilities helps the team be
      successful.
➢ Be an active member of the FIRST Robotics community.
  • No team is an expert at everything. Solicit the help of other teams,
    sharing your knowledge base, and work to help everyone reach the
    highest success as possible.

The End

Waialua Robotics Team 359
Waialua High School (הובלה, HI)
Helpful Tips on Managing and Sustaining A FIRST Robotics Program

Presented by: The Waialua Robotics Team 359-Hawaiian Kids
Waialua High & Intermediate School (Waialua, HI)

Presented by:
- Glenn Lee
  - Learning Center and Career Technology Education (CTE) Coordinator, Extended Learning Opportunity (ELO) Project Director, School Technology Cadre and Leadership Team.

Who We Were

- Hawaiian Kids story---
  - Rookie Year 2000
  - Mentored by Team 254, the Cheesy Poofs
  - 2 engineering mentors, 5 teachers, 1 coordinator
  - Afterschool club only
  - Sole funding sources-fundraising and donations
  - Attended 1 regional in San Jose, CA-Silicon Valley Regional
  - 18 students

Who We Are Today

Hawaiian Kids story---
- Participation in its 12th Season in 13 years
- Mentored Other Rookie Teams in the Past (Punahou Schools, Sacred Hearts Academy, Nanakuli H.S., Mililani H.S., Farrington H.S., Pearl City H.S., Nanakuli H.S., Waianae H.S. and many other HI teams)
- Collaborate with many FIRST Teams around the U.S. (W.I.N.C.)
- Array of mentors, former students, teachers, parents, and other volunteers.
- Program is part of our Industrial, Technology, and Engineering (ITE) and Arts & Communications Career (ACC) Pathways both during and afterschool.
- Funding sources-fundraising, donations, partnerships, Title IV afterschool programs grant, ELO Grant, HP grant, CTE Carl Perkins and the Hawaii State Learning Center, Hawaii Legislative Funding-Act 111, Other various mini grants.
- Consistently attend 3 regionals and 2 Championship Competitions (VEX and FRC).
- 25-35 students
- Established FRC, FLL, and VEX programs/competitions under the “Waialua Robotics Team.”
A few ideas on How to Raise Funds to Support your Program
- Basic Fundraising. i.e. discount cards, bake sale, restaurant certificates, Krispy Kreme, etc.
- Donation. Write Letter of Request and Thank You if donation is made
- Partnership. Establish a relationship between you and a Potential Donor. Goods, services in exchange for funding and/or in-kind donations such as robot parts, labor, meals, etc.
- Grant Writing: Mini, Local, District, Statewide grants that serve a range of programs from robotics to bigger STEM initiatives.

Sample Letter of Request and Thank You

Budget: Expenses, Fees, Hidden Cost
- Create a budget plan to meet the goals of participating in FIRST competitions.
  - i.e. Registration fees, travel, robot parts including spares, robot materials (metal, fasteners, playing field), team uniforms, tools, housing and meals if traveling to an event outside the State.
- Budget should include expenses to participate in team, outreach activities, and public events.
- Have contingency plans in case funding/facilities become an issue.
- Address sustainability issues for future events/seasons.
- What about next season? What happens if your robot needs to be fixed after an event?

School Support
- Student Body
  - NOT just for nerds.
  - Wide variety of skills needed. Spirit, writing, technology skills
  - Diversity: we are about 50/50.
  - Get older, more experienced students to teach the younger and new ones.
- Faculty/Staff
  - Get a great one with expertise that can contribute to your team functions.
  - Multiple is good.
- Showcasing Achievements
  - Show off trophies/awards.
  - Get on principals brag board.
  - Showcase the robots, demonstration at assemblies, display in the library, Back to School, Open House, Town parades etc.
- Lower Grade Levels
  - Farm System FTC/FLL/FFLL
  - FIRST is providing it, utilize it.

Raising Awareness in the Community
- Brochures / Pamphlets
  - Provide tangible source of information -- not just words.
- Fundraisers
  - Look at it not just as an opportunity to make money, but a partnership to get the
word out and provide a service to the community.

- Display your "robot and your program"
- Bring robots to fundraisers, march in parades
- Build a World Class display booth
- Work with other state departments – ex. DBEDT – for something that benefits the Innovation Initiative in Hawaii
- Mentors/Volunteers – don’t turn down any assistance offered

19 Media
- Interviews – Say "YES!"
- Students’ opportunity to shine
- Internet Publication
- Website

20 FIRST exposure
- FIRST Hierarchy
  - Woody, Dean & Dave
  - Competition Staff
    - Be nice to Judges/Staff/Cuers
  - Other Teams
    - Offer assistance
    - Collaborate and familiarize yourself with as much teams as possible
- Regional chapters
  - Hawaii FIRST Regional Planning Committee (HFRC)
  - Friends of Hawaii Robotics

21 Waialua Team 359 2011- Waialua Robotics Team Championship Chairman’s Award Winning Video
A summary of our robotics program-present day.

22 Recap (from our perspective)..........
- Managing a team involves the support of more than one or a few teachers.
  - Mentors, volunteers, and former students play a key role.
  - Having redundancy in support is a good thing.
- A team/school cannot sustain the costs of a FIRST Robotics program by fundraising alone.
  - Acquiring grants, establishing partnerships, and other sources of funding will help you reach your long-term goals.
- Establish a clear organizational structure and a student program of study.
  - Having clear goals, roles and responsibilities helps the team be successful.
- Be an active member of the FIRST Robotics community.
  - No team is an expert at everything. Solicit the help of other teams, sharing your knowledge base, and work to help everyone reach the highest success as possible.

23 The End

Waialua Robotics Team 359
Waialua High & Intermediate School (Waialua, HI)
August 10, 2010

Dear Ms. XXXXXXXXXX,

Throughout the past eleven years, the Waialua Robotics Team has participated in the For Inspiration and Recognition in Science and Technology (FIRST) Robotics competition, the Innovation FIRST VEX competition, and look to compete in the FIRST Lego League (FLL) competition this school year. Our team competed in past Regional and Championship FIRST and VEX events with great success and awards that represent our student’s hard work and efforts. Our primary objective for competing in the FIRST, VEX and FLL Robotic competitions is to provide a valuable hands-on learning experience and opportunity, where our students integrate science, mathematics and technology (STEM) in designing, engineering, programming and building a robot to meet specific functions. During our 10th anniversary last season, we had a remarkable run at winning 7 regional/championship tournaments and had a record year in terms of no. of students in the program, success in various areas of our program, and did an extensive amount of outreach for teams in the Hawaii Robotics Community. The WHIS Robotics Team is gearing up for the 2011 FIRST competitions, the 2010-11 VEX regional competitions, and the 2010-11 FLL competitions, scheduled from August 2010 to July 2011.

Raising funds is an essential part of our robotics program since the school alone cannot support the costs of such a program. Our estimated operating budget for the robotics program this school year is $110,000 since we are planning to participate in regionals for the FIRST/VEX/FLL competitions and the Championship/World events. Our goal is to raise enough funds through scheduled fundraisers and service projects; donations from our community members; grants from charitable foundations, sponsorship from businesses; and federally-funded school-level grants.

We respectfully request a contribution towards our goal. Your contribution will be applied towards competition fees; equipment and parts to create the robot; technology support such as computers and software; and shipping and travel expenses to the 2010-11 competitions. It will also sustain a program that has proven to be valuable time and time again to our students/faculty, and the pride of our communities in Waialua, Haleiwa and the State of Hawaii. Should we receive a contribution, the Robotics Team would add your name/organization to our sponsor banner to be displayed at competitions, public events, and our website. An invitation will be sent out in January 2011 for our Robotics Open House Tour scheduled for February 17, 2011. Thank you for your kind consideration.

Sincerely,

Glenn S.B. Lee
Lead Coordinator and Teacher
Waialua High School Robotics Team
October 6, 2010

Dear Ms. XXXXXXXXX,

On behalf of our Robotics team, we would like to thank you for your support in the amount of $20,000.00 towards our Robotics program.

Despite continued tough economic times, we have seen less support in schools and our program is working much harder than ever to maintain the positive experiences that impact our students. As a member and coordinator of the Waialua Robotics team since 1999, we have tried to provide the best learning experiences for students, provide them with the best support with outside mentorship/financial support, and continue to be a leader in the Hawaii Robotics community since our inception.

Today, there are now 400+ organized Robotics programs in the State of Hawaii from grades K-12. Our focus provides outreach/support to other teams so that they are able to compete at a high level, both in the State and nationally/internationally in competitions worldwide. It is quite a feat to look at Hawaii programs as not individual public or private schools, but as a Robotics community that supports Science, Technology, Engineering and Math (STEM).

Thank you for believing in a program that the Waialua/Haleiwa community has been proud of for our successes and accomplishments. We are very fortunate to know supporters who appreciate and value what educational opportunities can do for students. Despite the challenges, our program has grown to offer STEM and Robotics education to students from grades 7-12.

The Robotics Team will post your name(s) on our sponsor banner to be displayed at competitions, public events, and our website as a major sponsor this year. The school, community and most importantly, our students in the robotics program greatly appreciate the support given by sponsors. Thank you for believing and supporting our goals and the mission of the Waialua Robotics Team.

Please visit us at http://www.waialuarobotics.com to see the latest in what our robotics team has accomplished. If there is anything that our Robotics team can do for you, please let us know.

Sincerely,

Glenn S.B. Lee
Lead Coordinator and Teacher
Waialua High School Robotics Team
Science, Technology, Engineering and Math (STEM) in Action:
An In-Depth Look at How to Sustain a FIRST Robotics Program

Waialua Robotics Team 359
Waialua High & Intermediate School (Waialua, HI)
Who We are

Presented by:

- Glenn Lee
  - Robotics Teacher (1999–present) and Coordinator (2003–present)–CTE Industrial Engineering Technology Career Pathway
  - Learning Center Coordinator, Career Technical Education Coordinator, former Extended Learning Opportunity (ELO) Project Director, School Technology Cadre and Leadership Team, Fine Arts/PE/AV/CTE dept. head.
  - Degree in Electrical Engineering, minor in Math, M.B.A., Teaching Certificate in Secondary Education
Hawaiian Kids story---

- Rookie Year 2000
- Mentored by Team 254, the Cheesy Poofs
- 2 engineering mentors, 5 teachers, 1 coordinator
- Afterschool program only
- Sole funding sources–fundraising and donations
- Attended 1 regional in San Jose, CA–Silicon Valley Regional
- Main purpose was to compete in FIRST Robotics competitions.
Create a budget plan to meet the goals of participating in FIRST competitions.
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- What about next season? What happens if your robot needs to be fixed after an event?
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Student Body
- NOT just for nerds.
- Wide variety of skills needed. Spirit, writing, technology skills
- Diversity: we are about 50/50.
- Get older, more experienced students to teach the younger and new ones.

Faculty/Staff
- Get a great one with expertise that can contribute to your team functions.
- Multiple is good.

Showcasing Achievements
- Show off trophies/awards.
- Get on principals brag board.
- Showcase the robots, demonstration at assemblies, display in the library, Back to School, Open House, Town parades etc.

Lower Grade Levels
- Farm System FTC/FLL/JFLL
- FIRST is providing it, utilize it.
WHS Robotics Organizational Chart

Team 359
Waialua High School Robotics Team—“Hawaiian Kids”

Robotics Outreach
Robotics Web Page & Documentation
Robotics Support
Robotics Administration

Robot Construction
Robotic Administration

Team Leader: Glenn Lee
Coordination
Planning
Finances
Fundraising
Class Setup
Schedule
Team meetings
Purchase Orders
Team Travel
Grant & Financial Support

Glenn Lee, Marjorie Pudiquet, Myron Fujii, Lynette Hirota, Linda Souza
ROCOTT CONSTRUCTION
Team Leader: Mr. Melvin Matsunaga
Rules of Competition
Kick–Off Meeting
Rules Person: Glenn Lee

SOFTWARE
Programming
Robot
Autonomous
Mode

*Randy Wood

ROBOT ASSEMBLY
& COMPETITION
TEAM
Autodesk Inventor CAD
Operational Prototype
Final Robot
Controls Fabrication
Spare Parts
Pit Crew
Driver Selection

*Mel Matsunaga, Glenn Lee, Joseph Gudoy, Floyd Matsumoto, Garrick Ferreira, Jeff Bruno, Malcolm Menor, Randy Wood, Stuart Nishimura, Cody Smith, Adam Butac

ROBOT SUPPORT
Field & Goal Fabrication
Crate Modification
Cart Modification
Control Fabrication (Wood)
Fabrication Training

*Floyd Matsumoto, Joseph Gudoy, Garrick Ferreira, Harold Takemura
Week 1

**Robot Assembly Tasks**
- Prototyping, Drive/Chassis Fabrication & Subsystem Design

**Robot Support Tasks**
- Game & Parts Overview
- State the Challenge
- Brainstorming
- Select Robot Design Parameters
- Define Human Player & Other Team Functions

**Fabrication Training Tasks**
- Mill, Lathe, Cut–Off Saw, Band Saw, etc. Familiarization

Week 2

**Robot Assembly Tasks**
- Subsystem Fabrication & Drive/Chassis Assembly

**Robot Support Tasks**
- Complete Field & Start Fabrication Training

**Fabrication Training Tasks**
- Continue As Time Permits

Week 3

**Robot Assembly Tasks**
- Drive/Chassis Testing & Subsystem Bench Testing
- Driver Practice

**Robot Support Tasks**
- Build Control (wood) & Cart

**Fabrication Training Tasks**
- Robot Parts & Continue As Time Permits

Week 4

**Robot Assembly Tasks**
- Subsystem Integration & Final Assembly
- Driver Practice

**Robot Support Tasks**
- Build Crate

**Fabrication Training Tasks**
- Robot & Spare Parts Fabrication
- Dead Time

Week 5

**Robot Assembly Tasks**
- Final Testing
- Driver Practice

**Robot Support Tasks**
- Spare Parts Fabrication
- Dead Time

Week 6
Robotics Web Page and Documentation

Team Documentation
Team Leader: Glenn Lee
Digital Media
Multimedia Presentation
Open House

Team 359 Web Page, Animation Video, Team Video Documentary
- Web page design
- Animation
- Team roster
- Team organization
- Team updates
- Photos, candid
- Evidence of student learning

Competition Awards, Mentor/Student Awards, Pit Crew Manual, Annual Team Documentation
- 3 page document
- Supporting documents
- Media, newspaper, Interviews
- McInerny Foundation
- HP grant
- Castle and Cooke

*Victoria Pescaia, Glenn Lee, Gene Kois–Specific Video Productions

Brianna Acosta, *Glenn Lee
Robotics Support
Team Leader: Linda Souza
Coordination Planning

Robotics Regional Support
Omiyagi Team Uniforms
Chocolates and Pineapples
Team Agenda & Booklet
Team Schedule & Activities
Spirit items
Banners
*Lynette Hirota, Linda Souza

Robotics 6-week meal schedule
Snacks
Lunch
Supervision support

Chieko Lendio, *Linda Souza, Lynette Hirota
TEAM 359 OUTREACH
Team Leader: Glenn Lee

Community & School Service projects, Mentoring FIRST Teams, Organizations & Team Events to promote FIRST & STEM, Partnerships & Collaborations

Maintaining robotics in Hawaii & the Hawaii FRC Regional:
- Hawaii Robotics Planning Committee
- Hawaii Scholastic Alliance

Promoting STEM in Hawaii:
- Working with Governor Lingle on bills to promote STEM & FIRST in Hawaii
- Robot demonstrations at engineering events:
  Ex: Lacey Veach Day (Punahou Schools), Engineering Week (Kahala Mall)

Sponsorship of School-oriented Projects & clubs:
Ex:
- National Honors Society Blood Drive (4 per SY)
- Surf Art Kids Mural Project

Community Service:
Ex:
- Weed Circle Clean-up
- Dole Plantation Christmas Tree Decorating
- Dole Plantation Family Fun Day
- Annual Robotics Open House

FIRST Mentoring & Collaborations

FIRST & STEM
Raising Awareness in the Community

Brochures / Pamphlets
- Provide tangible source of information – not just words.

Fundraisers
- Look at it not just as an opportunity to make money, but a partnership to get the word out and provide a service to the community.

Display your “robot and your program”
- bring robots to fundraisers, march in parades
- Build a World Class display booth

Work with other state departments – DBEDT – for something that benefits the Innovation Initiative in Hawaii

Mentors/Volunteers – don’t turn down any assistance offered
Waialua Robotics Team Program Video

A 3 minute clip of our 2011 Chairman’s Award of our robotics program integrated within our school community, outside partnerships/businesses, and the Hawaii State DOE/Government.
Hawaiian Kids story---

- Completed 13th Season in 14 years
- Mentored Other Rookie Teams in the Past (Punahou Schools, Sacred Hearts Academy, Nanakuli H.S., Mililani H.S., Farrington H.S., Leilehua H.S., Pearl City H.S., Nanakuli H.S., Waianae H.S. and many other HI teams)
- Collaborate with many FIRST Teams around the U.S.
- 3 engineering mentors, 4 teachers, 5 university volunteers, 1 coordinator
- **Program is part of our Industrial, Technology, and Engineering (ITE) and Arts & Communications Career Pathways both during and afterschool.
- Funding sources—fundraising, donations, partnerships, Title IV grant, HP grant, Perkins, State 15849, and the Learning Center, Hawaii Legislative Funding—Act 111
- Attending 3–4 regionals and 1 Championship Competitions.
- 30 students on competition team, 120 students as part of a curriculum.
- Established FRC, FLL, and VEX programs/competitions under the “Waialua Robotics Team.”
Robotics Courses Sequence in alignment with the CTE Career Pathway:

**Arts/Communications (A&C) Career Pathway**
- TAC2010 A&C Core
- TAU2110 Graphic Communications
- TAN2110 Web Design
- TAN2210 Animation
- TAN2311 Gaming
- TAU2210 Digital Media

**Industrial and Engineering Technology (IET) Career Pathway**
- TIC5010 IET Core
- TIU5210 Metal Technology
- TIU5310 Design Technology
- TIU5620 Electronic Technology
- TIU5810 Engineering Technology

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<tr>
<th>Doe, John</th>
<th>8</th>
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**All participants below are currently active members of the Robotics Team.**

- Glenn Lee
  Coordinator and Lead Teacher
- Brianna Acosta*
  Univ. of Hawaii student Documentation support
- Rebecca Barone*
  Univ. of Hawaii student Documentation support
- Randiann Porras-Tang
  WHIS Principal
- Marjorie Pudiquet
  Robotics Account Clerk
- Theodore Nagata
  Community member support
- Joseph Gudoy*
  Welding mentor
- Wesley Carillo*
  Graphic Design Mentor
- Armand Gahol*
  Construction Mentor at Tournaments
- Chris Kawabata
  Electronics Mentor,
- Kayla Van Matre
  FLL Lead Teacher-Class Curriculum
- Adam Butac*
  Engineering Support-Electronics, Control System, Paint
- Cody Smith*
  Engineering Support-Machinist, CAD Design
- Malcolm Menor*
  Electronics Mentor
- Jefferson Bruno
  Machinist, CAD Mentor
- Sabina O’Neil
  Science Teacher, VEX Lead Teacher-Class Curriculum
- Floyd Matsumoto
  Community member support
- Randy Wood
  Computer engineering mentor, retired
- Melvin Matsunaga
  Machinist mentor, retired
- Stuart Nishimura
  Engineer mentor
- Victoria Pescaia
  Web Page Design mentor
- Deja Lunasco*
  Web Page Design mentor
- Linda Souza
  Accounting, Omiyage, Gifts-Cooordinator
- Lynette Hirota
  Meals and snacks coordinator
- Myron Fujii-Myron’s Travel Services
  Team travel agency support
- Jacob Ng
  President, 501(c)(3) fiscal partner-WHIS Foundation

Asterisk – Former Students of our Program
Program Alignment with Current State Initiatives:

- **Common Core Standards**
  - College and Career Readiness
  - English Language Art (ELA) and Math Content Standards and Assessment
    - Our program identifies learning targets and the use of assessment methods in the form of Constructed Response, Performance Assessment, Individual Communication and Portfolio Assessment.
  - Shifts in ELA and Math Instruction
    - Shift 4—Text-based answers in ELA and Shift 5—Applications in Math

- **Charlotte Danielson and Star Protocol**
  - Use of tools (daily planner) and components of the 4 Domains to validate and improve teaching and student learning.

- **CTE Career Pathways and Programs of Study**
  - Arts & Communication
    - Occupational Clusters include: Graphic Design, Media Arts and Technologies, Broadcast Media.
    - Industrial & Engineering Technology
    - Occupational Clusters include: Advanced Design & Engineering, Electronic Technology, Engineering Technology
Recap (from our perspective).......

- Managing a FRC Robotics Program involves the support of more than one or a few teachers.
  - Mentors, volunteers, and former students play a key role.
  - Having redundancy in support is a good thing.
- A team/school cannot sustain the costs of a FIRST Robotics program by fundraising alone.
  - Acquiring grants, establishing partnerships, and other sources of funding will help you reach your long-term goals.
- Participate in as many Outreach Events as possible.
- Establish a clear organizational structure.
  - Having clear goals, roles and responsibilities helps the team be successful.
  - Create a curriculum in your school that addresses common core standards, Hawaii State GLO’s and workplace readiness skills.
  - A CLEAR organizational structure and Strategic Plan helps garner funding support.
Final Thoughts, Questions, Concerns?

- Q & A Period

- For more information about our program, please visit www.waialuarobotics.com.