Hawk Girls Build LA: Leadership through increasing peer interest in College & STEM Education

Mission:

Hawk Girls Build LA consists of ten middle school girls with the motivation to become active members within their school community and strive to increase their classmates' interest in college and STEM education through leadership, engagement, and facilitating opportunities for learning. Their focus is primarily assisting in the initiative to bring positivity and support to the female community and encourage college and career pathways in the STEM fields. The team anticipates a campaign that with their passion for academics, leadership, and extracurricular they will be able to assist in measurably increasing the school site's interest in education by assessing individual students before and after student events.

Meet the Hawk Girls

"Girls have no limit!"-Katelyn

Brenley Koepp*	Cassandra Paul**
Deilany Murillo*	Kelli Chong**
Sara Holland*	Kirsten Spradlin**
Deema Itani*	Katelyn Hill*
Savannah Wilson*	Allison Fazis*

*Eighth grade, **seventh grade, ***sixth grade, and the Team Adviser: Kristy Mar (not pictured).

Our School

Demographics:

J.H. Hull Middle is a Title 1 public school located in Torrance, CA. The city has a population base if 148,495 (projection by the 2010 U.S. Census Beaureu.

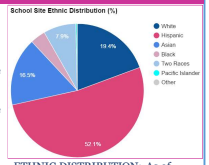
Total Enrolled Students

711

STUDENT COUNT: The 2016-2017 enrollment is approximately ~711 and offers open enrollment all year.

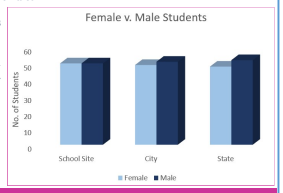
The school was re-opened in 2011 to the community when the old school structures needed restoration. During the construction time, students were bused to a local adult school for classroom instruction.

Approximately 78% of our students are enrolled in the free and reduced lunch program.



ETHNIC DISTRIBUTION: As of spring 2017, Hispanics comprise the majority of the school population (52.1%), followed by whites (19.4%), Asians (16.5%), two or more races (7.9%), African American/black (3%), Pacific Islander (1%), and other (less than 1%).

FEMALE v. MALE: The student enrollment is 50:50 at the school. When compared to the school and state, females comprise ~2-4% less females students enrolled in all schools.

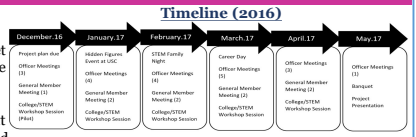


"At our school, we encourage and support our student diversity and leadership." -Principal Girgis

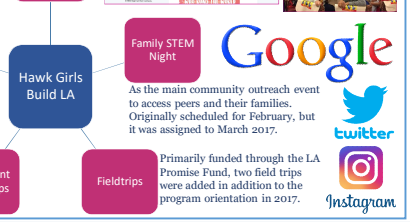
Project Plan

The Project Plan was developed during Phase 1 of the Girls Build LA timeline in December 2016. Hawk Girls Build LA met as a team to brainstorm needs to meet the goals to promote college and STEM education at the school site. In addition, they focused on increasing female student interest in this area. The draft experienced modifications were when unique opportunities were presented to the team.

Timeline (2016)



Social Media: HawksBuildLA



Methods of Outreach

Hosted twice a month, this was an opportunity for the team to access student interest in college and STEM areas through fun activities.

Each team member (individually or in partners) developed and presented a college or STEM activity to peers during school hours. The purpose was to practice ideas for the STEM Night. Workshops occurred 4 days of each month from January to April 2017 (average).

"Pursuing student success through teamwork"

J.H. HULL
Home of the Hawks

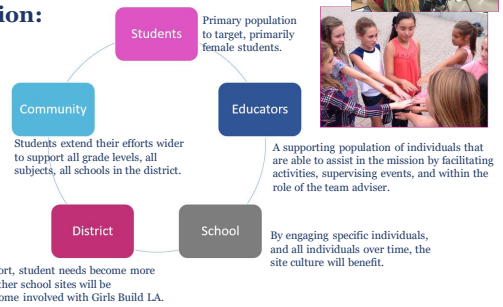
The Goal

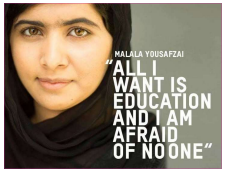
Through the Girls Build LA program and funding through the LA Promise fund, the team aspired to:

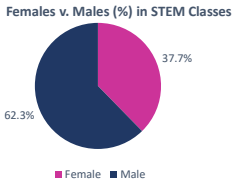
- ✓ Build student leadership opportunities,
- ✓ Increase enrollment interest in school site STEM/PLTW courses,
- ✓ Increase student opportunities to access college and STEM information,
- ✓ Increase female student interest in college and STEM pathways,
- ✓ Involve as many school programs as possible to support student success,
- ✓ Involve site educators to support Hawk Girls Build LA,
- ✓ Plan consistent and periodic opportunities in college and STEM education to peers and the community.

Support increasing student interest in College & STEM Education:

The approach to successfully obtaining the goals to increase college & STEM education and interest within the student body involves engaging the whole school site. While focusing on the students, educators, the school, district, and community must be a part of the process to effectively reach the student body and make an influence.







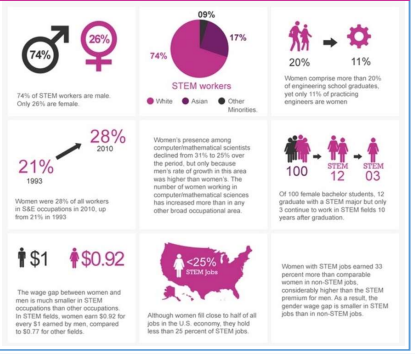
"Despite holding a STEM degree and having gone into one of its fields leading up to teaching, I did not know the actual statistics and truth.. I understand better now through this project." Ms. Mar, Science teacher

National STEM Facts on Women & Girls

Reported by Forbes, the statistics gathered from the US Census Bureau, 2010, suggests that female college enrollment has been increasing as early as the 1970s. Whereas females enrollment became gather than male enrollment in the early 1980s.

Many factors may be considered when asked why there is a discrepancy between the number of females versus men in higher education, but the focus of Hawk Girls Build LA is to understand and contribute actionably to the STEM initiatives by addressing the percent gap of women working in STEM fields and making an impact at the school site level.

So how can Hawk Girls Build LA supports girls and women interested in STEM?



Just the Team

"We learned so much and want to share with our classmates!" -Hawk Girls Build LA

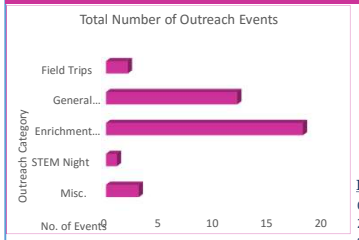
The **Girls Build LA Orientation at USC** on October 17, 2017 was a unique experience for the team.

Through the orientation events, all team members took diligent notes on the lessons to be shared by the speakers. Members for the first time were in a room filled of hundreds of female peers with a mission- which was a first for everyone. It was inspiration and it became less intimating knowing they had a community of supporters.

The **Girls in Ocean Science Conference** was located in Dana Point, CA and hosted by the Ocean Institute. On February 7, 2017 7 of the Hawk Girls Build LA attended the conference for the purposes of professional development as leaders and to inspire project ideas to bring back to their peers. For this reason, it was built into the project plan to increase their professional network of female peers. Students were able to participate in seminars and real-time marine specimen collection.

They felt like actual researchers!

Outreach



In total, the Hawk Girls Build LA were able to provide 36 events to their peers through fieldtrips (2), general meetings (12 lunch periods), enrichment workshops (18 periods), a STEM Night, and 3 events: field trip preparation (2) and engineering activity for male students supporting the Girls Build LA initiative.

Fieldtrips

On January 10, 2016 50 female students and 5 educators (math and science) attended the inspiration Hidden Figures screening at USC. Following, 20 females students, 20 male students, 2 parents, and 2 educators attended the USC Robotics Open House on April 7, 2017.

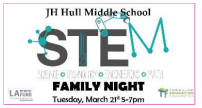
General Meetings

Approximately 300 students were served during the December 2016 (pilot) to April 2017 timeframe at a rate of twice a month. Within the meetings, students met over lunch and participated in activities involved in college planning and STEM topics of interest. Each session has a recorded attendance between 6 to 40 students where 98% (~240 students) female.

@HawksBuildLA

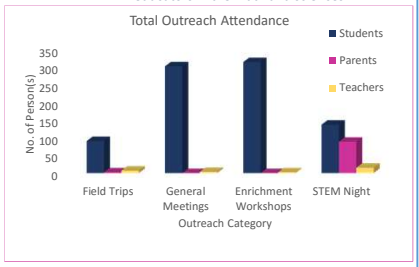
Enrichment Workshops

An attendance of 312 students was recorded between 18 enrichment periods. The purpose of the enrichment period was to provide activities and topics that aligned with the Next Generation Science Standards (NGSS) and Middle School College and Career Readiness standards. During workshops, various topics selected by the team members were translated into a lesson that was presented to their classmates. From surveys collected ~89% (274) of the students were female. The workshops also regularly impacted 2 educators in the math and sciences.



STEM Family Night

Based on attendance, 136 students (grades K-12), 88 parents/adults, and 15 educators participate in STEM Night. This event was the first of its kind at the school. It included 8 students clubs (i.e. Aerospace team, Women in STEM, etc.), 4 school programs (i.e. GATE, PBIS, RTI, and Parent Night), and 6 school departments (i.e. English, history, math, science, special education, and STEM). Not to mention 3 administrators participated. Volunteers were provided through our PTA and high school students. Hands-on college and STEM sessions (10) were offered along with opportunity for 9 demonstrations/showcases.



Outcome: 838 Tallied attendees, 238 surveys, infinite in-person feedback = ~60% (422 of 711) Students engaged overall through events, ~71% female students (299 of 422), survey suggests 100% of students could consider a STEM class and 100% are interested in college.

Looking forward towards encouraging greater participation next year!