

Berkeley Maker Camp Summer 2022

June 13-July 8

Berkeley Maker Camp is a 4-week summer camp that took place at King Middle School for 100 rising 7th & 8th graders and at Berkeley High School for 50 rising 9th graders.



All students participated in two 2-week units of curriculum:

- Gaming and Stop Motion Animation at King
- Robotics & Engineering and The Magic of Making at Berkeley High



"Thank you so much for this opportunity that you offer to students at BUSD. I was looking and trying to find something for my son to keep him busy during this summer. He asked for STEM, but camps are really expensive and hard to afford. I just started working part time after the pandemic. I really want to thank you so much for giving kids this opportunity."

-A Maker Camp parent



"I think this camp was really instrumental in encouraging my daughter to pursue STEM subjects, but there's a need for further encouragement as these girls/minorities continue through the years of middle and high school."

-A Maker Camp parent

Berkeley Maker Camp Demographics		
	Enrolled #	Enrolled %
Black or African American	43	28%
Hispanic or Latinx	55	36%
American Indian or Alaska Native	1	1%
Asian American or Pacific Islander	19	13%
White	11	7%
Two or More Races	22	15%
Gender - Male	75	50%
Gender - Female	75	50%
Gender - X	1	1%
English Learner	43	29%
Socio-Economically Disadvantaged	90	60%



GAMING at King

In King Middle School's GAMING class, Maker Camp students learned how to program micro:bits and created CuteBots that could spin in circles, avoid obstacles, play music, and be controlled by remote control.

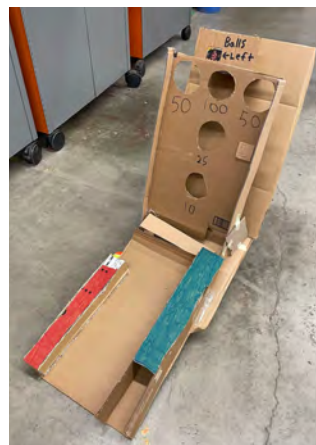


They also designed and engineered their own carnival games using cardboard, and incorporating micro:bits to motorize the game or to keep track of the score.

The 2-week unit culminated in a carnival during which students played each others' games, calculated win percentages, earned tickets and won student-made prizes.



"I'M SO PROUD OF MYSELF"
-A King Maker Camp student



STOP MOTION ANIMATION at King

In King Middle School's STOP MOTION ANIMATION class, Maker Camp students developed characters and storylines, built sets and created short films using special cameras and WeVideo. They worked on lighting, editing and music production as they put their films together.



Students got to work with high school mentors who had experience in film production and studio arts. The 2-week unit culminated in a showcase that featured everyone's short films.



ROBOTICS & ENGINEERING at Berkeley High

In Berkeley High's ROBOTICS & ENGINEERING class, Maker Camp students learned how to build robots and write code. They programmed robots that could pick up objects and knock other robots out of a ring.



They also designed and cut dog tags, 3D printed various objects, and learned how to solder with the guidance of high school mentors, all of whom are on Berkeley High's Robotics Team.



"I liked talking with the students...and I liked watching them get excited when making things."
-A BHS Maker Camp mentor



THE MAGIC OF MAKING at Berkeley High

In Berkeley High's THE MAGIC OF MAKING class, Maker Camp students learned about carpentry, design and fabrication. They used different power tools, including a bandsaw, a disc sander and a drill press, to make their own clipboards.



Students used Photoshop to create designs that they etched onto their clipboards using a laser cutter. Then they painted their clipboards and used a hammer and anvil to attach the clip to the top.



Students also learned how to use various hand tools as they stamped their names into brass tags, made infinity cubes, Jacob's ladders, buttons, and more.



"I loved meeting like-minded people."
-A BHS Maker Camp student



In addition to the STEM curriculum, students partook in various activities that gave Maker Camp its summer camp feel. Students created logos and each cohort voted on a winning design that students then screenprinted onto t-shirts.



Students also designed and made stamps, sunprints, bracelets, 3D-printed keychains and other trinkets to take home.



The students at King went on an Engineering Tour of San Francisco which included taking the school bus across the Bay Bridge, walking down Lombard Street, walking across the Golden Gate Bridge, then taking the school bus back to King across the Richmond-San Rafael Bridge. They also visited the Musée Mécanique to check out mechanical carnival games.



All students at King *and* Berkeley High took a field trip down to the San Jose Tech Interactive where they explored different exhibits, watched an IMAX movie about sea lions and participated in various engineering workshops.



On the last day of Maker Camp, students, mentors and staff all participated in various relay races, sports and other outdoor activities to celebrate four weeks of learning and fun together.

