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AC 2010-443: HISPANIC COMPUTER BRIGADE SILICON VALLEY COMPUTER CAMP

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Hispanic Computer Brigade Silicon Valley Computer Camp

Abstract

Hispanic students are vastly underrepresented in computing during a time when the Hispanic population in the U.S. is growing dramatically. By 2020, Hispanics will account for 50% of the workers in California. And, by 2050, the Hispanic population is projected to triple in the United States with 25% of the U.S. population being of Hispanic origin.

The College of Engineering (CoE) at San José State University proposed a new approach for recruiting Hispanic students into computing disciplines and careers through the Hispanic Computer Brigade (HCB) initiative. By forming HCBs in two local high schools, we aimed to inspire and engage Hispanic students through IT service learning projects. The high school students began the program with a summer camp, continued to learn and engage computing throughout the year with community service learning, and will end with a local competition where students will showcase their computing projects with high school faculty, SJSU faculty, parents/guardians, and the community. Students are learning computer and programming skills and processes in weekly meetings with the help of advisors and mentors.

To support the Hispanic Computer Brigade initiative, the CoE received support from the National Science Foundation (NSF) for a one-year pilot program for Hispanic students from the San Jose East Side Union High School District. The first segment of the HCB program was the Silicon Valley Computer Camp (SVCC). This paper describes the design, operation, and preliminary results of the SVCC.

Introduction

The U.S. does not produce enough engineering talent to drive the next wave of innovation to create new jobs and maintain its global leadership in technology.¹ Today, the average engineering student is either: (1) a Caucasian man, (2) an Asian man, or (3) a foreign-born student.² There is a significant under-representation of women, African-Americans, and Hispanics in Science, Technology, Engineering, and Mathematics (STEM) fields. In order to ensure America's pre-eminence in science and technology, it is critical that we be more effective in attracting women and students from all ethnic groups into this field.

For the past two decades, the percent of engineering degrees awarded to Hispanics in the U.S. has remained low. Only 5% of Hispanic undergraduate students receive degrees in engineering; of that number, 79% are men. This under-representation of Hispanic students in engineering is taking place during a time when the Hispanic population in the U.S. is growing rapidly.^{3 4} By 2020, Hispanics will account for 50% of the workers in California.⁵. And, by 2050, the Hispanic population is projected to triple in the United States⁶ with 25% of the U.S. being of Hispanic-Hispanic origin.⁷

San José State University (SJSU), in the heart of Silicon Valley, is in a unique position to attract Hispanic students to engineering. Silicon Valley has the highest percentage (13%) of its

workforce in technological occupations among all regions in the nation. It has been the technology center of the world, known for advancing technology frontiers from semiconductors to networking to software to web technologies. Leveraging the intellectual resources in Silicon Valley gives SJSU a unique advantage to attract and engage Hispanic students.

The Charles W. Davidson College of Engineering (CoE) at SJSU proposed a new approach for recruiting Hispanic students into computing studies and careers through the *Broadening Participation in Computing—Hispanic Computer Brigade* initiative. By forming Hispanic Computing Brigades (HCB) in two local high schools, we intend to inspire and engage Hispanic students through IT service learning projects. The first segment of the HCB program was the Silicon Valley Computer Camp (SVCC). The SVCC was held on June 22-26, 2009, with a total of 22 students from two local high schools. At the summer camp, students built their own computers and were taught a range of fundamental computing skills to equip them to create socially-relevant projects for their local communities during the academic year through computing clubs.

HCB Goals and Outcomes

The purpose of the HCB initiative is to develop an innovative approach of stimulating and sustaining Hispanic students' interest in learning and applying computing and embed this initiative in the College's demonstrably successful efforts in recruiting and retaining Hispanic students. The intent of this project is to provide a program that:

- Links service learning to student interests in the computing disciplines
- Develops and/or increases students' positive attitudes towards computing
- Increases students' knowledge of opportunities in computing disciplines
- Exposes students to role models in computing with whom they can identify
- Increases parental awareness of career opportunities in computing fields

The HCB initiative pays special attention to students' internal and social processes for learning. The internal processes refer to students' motivation for pursuing a particular area of study or activities. The social processes, on the other hand, refer to students developing a sense of belonging to their group. These two processes, when properly designed, reinforce each other in furthering students' learning in a particular area. Consider two types of motivation, intrinsic and extrinsic, which play roles in students' effective learning.⁸ Extrinsic motivations work well when students are rewarded for behaviors that are valued by others in their group. Research has indicated that, for Hispanics, "computer engagement is both facilitated and undermined by a myriad of additional non-cost-related sociocultural factors".⁹ Therefore, a way to expand participation by Hispanic students is to allow them to pursue personally rewarding, group valued interests while providing them with a rich and dense social support network. We included comprehensive student mentoring as an integral part of the HCB initiative to draw the high school students into both the university and the technology communities.

Several studies^{10 11 12} show that Hispanics generally have greater intrinsic motivation or underlying interests in social and relational issues. That is, they could be attracted to computing if it was presented in a social context as a means to solve "community problems" that were meaningful to them. Therefore, one key component of the HCB initiative was to

programmatically engage students in the use of computers to advance their personal interests, such as the desire to serve humanity or to "give back" to the community. As they learn of the utility of computing, they will be inspired to further the development of technology to meet their desire to serve, thereby aligning their personal interests with the pursuit of computing. Another key component of the HCB initiative was the design and implementation of a social support network for the students to develop a sense of "belonging," which is necessary for their expansion into and maintenance of computing interests. The network will not only meet their need for a sense of belonging but will also change the culture of computing in the process.

Planning Stage

The SVCC was a collaborative project between school administrators, industry leaders, and university professors. It took six months to design and implement a residential camp experience at SJSU (see Figure 1). One objective of the HCB initiative was to build a social network that could support and encourage high school students in computing disciplines. The summer camp was the first step in building a sense of community within their high schools and at the college level that might positively affect their college aspirations. We will further discuss the process of coordinating and implementing an engaging camp experience for the high school students.

We began our project by selecting two high schools, Silver Creek and Mount Pleasant, in the East Side Union High School District to participate in our program. We held community forums at both high schools to meet with the parents and answer any questions they had. Research shows that students are more likely to pursue computing disciplines if they are encouraged by their parents^{13 14}. One of the co-PIs for this project, Dr. Julio Garcia, is a native Spanish speaker. He took the lead in presenting this project to Hispanic parents and community members. The Project Director also attended the meeting in addition to the high school club advisors.

Completion Date	Planning Tasks				
January 2009	Select two high schools				
	• Meeting with co-PIs to develop curriculum				
March 2009	Prepare schedule of activities				
	Reserve campus housing				
April 2009	• Submit HR paperwork for faculty				
	Identify math and science teachers				
	Contact motivational speakers				
May 2009	• Purchase insurance from the university				
	Purchase computers and software				
	Obtain Tech Museum tickets				
	Recruit camp counselors				
	Recruit IT mentors				
	Hold community forums at high schools				
	Create and distribute application packets				
	Meeting with external evaluators				
	Create surveys and send to IRB				

Figure 1. Timeline for the SVCC

	Create assessment schedule
June 2009	Interview camp counselors and IT mentors
	Collect the application packets
	• Send confirmation letters to HS students
	Confirm motivational speakers
	• Load software in the computer lab
	Review curriculum materials
	Submit camp materials for duplication
	Submit documents to campus housing
	Arrange food for summer camp
	Purchase additional equipment
	Purchase movie tickets
	Train student mentors
	Meeting with camp personnel

We adapted our camp curriculum from the Colorado School of Mines (CSoM).^{15 16} The CSoM utilized basic computer programs to teach middle school students about computer engineering and programming, including ALICE basic programming software,¹⁷ Lego Mindstorms robot kits, FrontPage website design, and GPS tracking systems. Engaging students with introductory computing programs became an important component of our summer camp program. We had to anticipate that the students would have minimal computer experience. A recent California survey stated that fewer than 50% of Hispanics have home computers and only 40% have Internet access at home ¹⁸. To generate interest in our program, we promised each student a computer if they participated in the SVCC and attended the HCB club meeting throughout the academic year. Instead of giving each student a pre-assembled computer, we decided that the students should build their own computers during the first and second day of camp. In this way, students could learn about computers through hands-on experiences in a structured environment supported with engineering faculty and student mentors.

According to the AAUW report that studied 416 research and intervention projects between 1993 and 2001 to increase the number of girls and women in STEM fields, two thirds of the engineering projects focused on traditional engineering projects such as building robots and bridges¹⁹. This approach is not the most effective approach with women and students of color²⁰. Specifically, what doesn't work is a "technology for technology's sake" approach for women and Hispanic students—which is what most educators have been doing. Instead, we wanted to inspire students to apply computing concepts for the benefit of their community. Although community service learning is the second phase of the HCB initiative, we sought to encourage social applications throughout the SVCC experience. We chose our software based upon its accessibility and social applications for the students. For our programming lesson, we selected the ALICE software. ALICE is a 3D programming environment that allows students to create animations using a wide variety of objects. It features a "drag and drop" interface that reduces programming errors and provides students with immediate and tangible results. For the robotics experience, we selected PicoCrickets. By incorporating light, sound, and motion tutorials, students could explore causal relationships between writing programming codes and watching the results in the PicoCricket robots. PicoCrickets also featured a "drag and drop" interface that would reduce human errors and, consequently, create a more positive learning environment.

Once we developed a tentative camp schedule, we distributed the activities between the administrative staff (see Figure 2). Each instructor was responsible for a one to four hour lesson plan that alternated between lectures and hands-on activities. We also planned extracurricular "social" activities that would allow the students to burn off their energy and build stronger relationships with their peers and instructors. These activities included: board games; bowling; soccer; volleyball; and movies.

Name	Title	Responsibilities
Belle Wei	PI	Program Director
Patricia Backer	Co-PI	Program Coordinator
Weider Yu	Co-PI	Computer Assembly; Software Installation
Julio Garcia	Co-PI	ALICE Software
James Lee	Co-PI	Team Building Activities
Janet Sundrud	GSA	PicoCricket Robots

Figure 2. Administrative Staff for the SVCC

An important aspect of our summer camp was the inclusion of student mentors. We divided the student mentors into three categories to provide different interactions with the high school students: (1) computing mentors, (2) residential leaders, and (3) social mentors. Each category had a different responsibility and purpose within the camp structure. In example, the residential leaders supervised the high school students during the nighttime hours, the social mentors were recruited from the SJSU student chapter of SOLES (Society of Hispanic Engineers & Scientists) to participate in the evening activities (e.g. bowling, board games, and movies), and the computer mentors assisted with all computer-related lesson plans. The purpose of the student mentors was to bridge the gap between high school and college. In many ways, the high school students could relate to university students and could learn about college through casual conversations. Through our intensive mentoring, we hoped to expand the students' perceptions of their communities and provide them links to the university.

Many of the student mentors were recruited from engineering disciplines and could draw upon their educational experiences to encourage and mentor the high school students. Each mentor was trained by Dr. Andrew Wood, Director of the Peer Mentor Program. The mentors attended a one-day session which prepared them to be effective mentors and positive influences on the high school students. The topics in the peer mentor training included: principles of mentoring, effective listening, and personal assessment of learning styles, dealing with stress while mentoring, motivational strategies, boundary setting, and code of conduct.

Although these activities were finalized before the summer camp began, we had to remain flexible during the implementation of each activity (see Appendix 1). There were many times that we had to modify the schedule to accommodate unexpected events (e.g. students wanted to visit the student store; computer building took longer than expected; we experienced problems with the dorm check-in process). Fortunately, we had a dedicated staff that worked hard to make this camp a memorable experience for each student. We communicated with students and

instructors through cell phones and staff members worked behind the scenes to ensure the smooth implementation of this summer camp.

Implementation Stage

On June 22, 2009, we greeted parents and students as they made their way to the Engineering Building conference room. We provided the students with a curriculum binder and a welcome bag (including t-shirts, pens, paper, and other school supplies). Breakfast was provided and the parents and children sat in quiet apprehension until we started the welcome ceremony. Only 21 out of 25 students arrived; this would require us to call "alternate" students that would arrive Tuesday morning. In total, 23 students attended the SVCC; thirteen boys and nine girls. Three students were African-American and nineteen were Hispanic. The average age of the SVCC participant was fifteen years old.

Once the parents left, we led the students to the engineering computer labs to start their week of computer lessons. We used the *Engr 10: Introduction to Engineering* laboratories for this project. In 2007-2008, the College invested over \$300K in updating the Engr 10 laboratories. The Engr 10 labs consist of two adjacent rooms with computer workstations on the periphery and round worktables in the middle of each room. The rooms were designed to be aesthetically engaging to the students.

The students were provided with a binder of resource materials, including a step-by-step guide to building a computer. This material was supplemented with lessons about computer components and demonstrations on how to build a computer. The materials were designed to accommodate various learning styles (i.e. tactile, visual, audio) and create a strong foundation for the remaining computing activities (see Figure 3, 4, & 5). Through short lectures, we could simulate a college classroom that might prepare students for their own college careers. The students were avid listeners and raised thoughtful questions. We divided the students into groups of two and let them work through the step-by-step guide for computer assembly.

Figure 3. Students listened to lectures as if they were attending a college class.



Before the students started building their computers, we separated the students by gender and moved the boys into the adjoining room in the Engr 10 laboratory suite. Research shows that women are socially conditioned to avoid technology²¹ and when they participate in STEM fields, they do not expect to succeed because of gender stereotyping.²² By separating the boys and girls, we wanted to encourage the girls to work together to solve computer-related issues. The students were supported by two computer mentors and four members of the administrative staff. We were able to provide a student-teacher ratio of 4to-1 during most of the computing activities.

However, the daily activities extended beyond computer lectures and activities. We incorporated one-hour long "team building" lessons to explore the students' individual strengths and

weaknesses. These team building exercises were offered every day for one hour and were conducted by one of the co-PIs, Dr. James Lee. The purpose of these activities was to strengthen the bonds between the members of each HCB club. Students could discuss their individual roles and developing collective goals within their respective HCB club.

Figure 4. Computer mentor (left) guided students through computing activities.



Figure 5. Students looked at assembled computers to check their own progress.



After dinner each night, corporate representatives were invited to speak to the students about careers in computers, which included high tech companies such as Google, IBM, Microsoft, and AnyBot (see Figure 6). Many of the speakers were of Hispanic origin and they were encouraged to discuss their pathway into computing and advice for other minority students. The guest lecturers had the opportunity to connect with young students and share some advice that might prepare them for computing careers. The students were excited to meet the guest lecturers and learn, firsthand, exactly what a computing career might entail. We also hosted a student panel with several of the SJSU student mentors; collectively, the student mentors represented five engineering disciplines within the CoE. The student mentors discussed their career goals and explained why they chose engineering careers. Halfway through the panel, the high school students wanted to know what led the faculty to become teachers and what degrees they had earned. The student panel fostered a discussion with the students about their own plans for college and what they might like to pursue.

Company	Representative
IBM	Dulce Ponceleón
Google	Gaby Aguilleras, Luiz Mendes, Raquel Romano
AnyBot	Benjie Nelson
Microsoft	Claudia Galvan

Figure 6. List of Industry Speakers

During the night, the students were housed in the dormitories and paired together with a student of the same sex. The two residential leaders had their own rooms in close proximity to the students. There was one dormitory rule that was strictly enforced: Students of the opposite sex

could not spend time together in the dorm rooms. If the students wanted to talk with each other, they were encouraged to stay in the common areas. This rule actually encouraged social interactions between the students. They would spend their evenings in the living room and watch movies together. The residential leaders would supervise the students and ensured that everyone was settled into their rooms by 10 pm each night. In the morning, the residential leaders hustled the students to breakfast and then walked them to the computer labs for their daily lesson.

On the second day of camp, students learned about computer software installation and computer networking. Most of the students (77%) had never installed software before coming to the SVCC. We assigned each student with the task of installing the Windows Operating System on their computer, in addition to Norton Antivirus and Microsoft Office Suite. We purchased individual software licenses for each of the students and told them to take the software home with them. By providing students with Microsoft Office, we can encourage them to use their computer for school work and improve their proficiency with computing tools. Dr. Weider Yu, a professor in Computer Engineering, was the lead instructor for the first two days of the camp.

Figure 7. Students learned about computer animation and programming with ALICE software.



Figure 8. Students designed robot prototypes.



Another activity on the second day was a class field trip to The Tech Museum of Innovation in downtown San Jose, California. The Tech is an interactive and experimental learning environment for all ages. Many of the exhibits provide hands-on learning that reinforces STEM concepts. After learning about computer animation and programming, the students could more fully appreciate the exhibits at the Tech. The computer mentors followed the students around the Tech and discussed concepts learned from the computing activities. Even though admission to the museum is free to local high schools, 30% of the students had never visited this museum before the summer camp.

<u>The third day focused on computer programming with the ALICE software²³. This user-friendly software introduces high school students to the basics of programming. Because it is a visual interface, students can see their programs run. Research has shown that ALICE helps students with weak math skills and/or little programming to experience succeed in computing²⁴. Also,</u>

since this program is free of charge, students can load ALICE onto the computers they built. After a short introduction in the morning, the students quickly learned to use ALICE to develop their own animations which they demonstrated at the end of the day to their peers. Dr. Garcia was the instructor for the ALICE programming day.

The fourth day focused on robotics where the students used PicoCricket robots. We began our day's activities with short tutorials supplied with the PicoCricket Workshop Kits. Because of the simplicity in the programming for the PicoCrickets, the students were able to quickly construct their own designs for working robots and program them using the PicoCrickets software. PicoCrickets enabled these students to design and program artistic creations that integrated light, sound, music, and motion. We chose PicoCrickets because they appeal to a wider range of students as compared to more traditional robot kits²⁵. Ms. Janet Sundrud, a graduate student assistant, was the lead instructor for the PicoCrickets instruction.

The fifth day focused on the community service component of the HCB initiative. Dr. Lee divided the students by school to discuss club logistics and brainstorm potential community service projects. They came up with several ideas that would become the starting point of their HCB club activities in AY2009-2010 (see Figure 9). Afterwards, the students prepared a power point presentation to share with their parents at the closing ceremony.

Figure 9. Potential activities for the HCB Clubs

- Refurbish and upgrade old computers
- Create a website to share computer resources
- Upload video tutorials to teach parents about computers
- Train teachers how to use computer software
- Create a database of community service opportunities
- Mentor students in college preparation for STEM careers

We also held a two-hour session on the last day of the summer camp for the parents/guardians of the student campers. According to Hurtado and Kamimura²⁶, "recruiting efforts need to be focused in demographically Hispanic-concentrated areas, involving counselors and parents in the application process..." The parent session provided information about the college application process and the FAFSA (financial aid) process. This session also emphasized the importance of high school grades and the need for students to take mathematics courses throughout their high school careers.

After the parent information session, the students and parents were reunited. The student campers presented their activities for the week and demonstrated projects for each of the different activities. This was followed by a closing banquet with student participants, staff, faculty, and the students' families. We were expecting only the parents to come; however, many younger siblings and extended family members came to the closing banquet to show their support. During the closing ceremony, we gave each student a certificate and SJSU memorabilia. Additional information about the summer camp is available on our website at http://www.engr.sjsu.edu/hcb/summercamp.htm.

Figure 10. Participants and staff for the SVCC



Conclusion

The students completed an online survey on the last day of camp, which revealed that 95% of the high school students: (a) were more aware of computing careers; (b) better understood which courses would prepare them for college; and (c) were motivated to engage in the HBC club activities. 64% of the high school students told us it would not have been possible to accomplish these computing activities without the lectures and discussion. This camp was a positive experience for all of the campers. Through this activity, we discovered that:

- Students found the lectures helpful to their learning although they felt some of the lectures were too long
- Students found the guest lectures and speakers engaging and interesting
- Students experienced new computer activities that they would not otherwise have experienced at home or school
- Everyone was pleased that they enrolled and participated in the program

The SVCC has also fostered relationships between the local high schools and industry leaders. On October 25, 2009, the Claudia Galvan and the HOLA-CA group hosted 25 Latino students of Mt Pleasant High School as part of the Hispanic Heritage Month events in Microsoft Silicon Valley. A full day of activities was scheduled that included SVC campus tours, presentations by the HOLA-CA core group members and a visit to the Computer History Museum.

The Mt. Pleasant students were impressed with the Microsoft facilities. One of the quieter girls, Fabiola Saucedo, told her club advisor, "I want to work here, because they can use all the [facilities] and it's so NEW!" Although the tech world seems distant for our Latino students, the background stories that the Hotmail team and other members like Ivan, Jorge, and Raul presented made an especially strong impact on the HCB students; they were able to relate to these stories as possible opportunities in their own future. One student, Joanna Curiel, was thankful at being able to see and meet people who were from Mexico and who obviously had a successful career in technology, she said, "I joined HCB because I was interested in computers,

but going here made me feel like I can work and have a career in computers." According to Vanessa Vitug, the HCB club advisor at Mt. Pleasant, the trip to Microsoft was truly a success. It was an important step in opening-up a window to a world of opportunities for their Hispanic students.

The SVCC is part of a larger project which will continue throughout the 2009-2010 academic year. At the end of this project, we will conduct an in-depth assessment of all activities, which can provide insight into the effectiveness of this approach in attracting students of color into computing. This project could provide a new approach for increasing the participation of Hispanic students in computing by developing programs that utilize students' internal and social process for learning as well as leveraging local partnerships with technology companies and organizations. The new approach presents computing in a social context with applications that are meaningful to target students. As it focuses on applications instead of technology, it could attract students who otherwise would not consider studying computing in college, especially those in underrepresented groups. The result will be a larger talent pool that is critical for the U.S. to innovate and lead in information technology.

Appendix 1. The finalized version of the	e camp schedule
WEEKLY CALENDAR PLANNER	WEEK OF 6/22-6/26/09

	Monday 6/22/09	Tuesday 6/23/09	Wednesday 6/24/09 REVISED	Thursday 6/25/09 REVISED	Friday (students) Engr 393 6/26/09	Friday (parents) Engr 285 6/26/09
7:00	Campers arrive (Backer)	Breakfast	Breakfast	Breakfast	Breakfast	
8:00	Breakfast (all Pls)	8:30 Install software (Yu)	8:30 Alice software (Garcia)	8:30 PicoCrickets (Sundrud)	Pack Bags/checkout	
9:00	Welcome Event (Wei) 9:30 Take survey	Install software (Yu)	Alice software (Garcia)	PicoCrickets (Sundrud)	9:30 Discuss HCB clubs (Lee)	
10:00	Build Computer (Yu)	Install software (Yu)	Alice software (Garcia)	PicoCrickets (Sundrud)	Discuss HCB clubs (Lee)	
11:00	Build Computer (Yu)	Install software (Yu)	Student presentation Alice software (Garcia)	PicoCrickets (Sundrud)	11:30 Lunch	
12:00 pm	Lunch	Lunch	11:45 Lunch	11:45 Lunch	12:30 Students brainstorm community service projects (HS Teachers)	
1:00	Build Computer (Yu)	Install software (Yu)	Library Tour (meet at Welcome Desk, 1st Floor)	Guest speaker- Benjie Nelson, AnyBot	Students brainstorm community service projects (HS Teachers)	
2:00	Build Computer (Yu)	Visit to Tech Museum	2:15 Networking (Yu)	1:30 Create PicoCrickets (Sundrud)	Prepare student presentations (Sundrud)	Parents arrive (Ortega) Eng 285
3:00	Build Computer 3:30 Dorm check-in	Visit to Tech Museum	Networking (Yu)	SJSU Campus Tour	Prepare student presentations (Sundrud)	* Discuss college enrollment (FAFSA) & computing related careers * Discuss HCB club involvement (Ortega) Eng 285
4:00	Test computers (Yu)	4:30 Return to Campus	Team building activities (Lee)	Team building activities (Lee)	Students showcase their work Eng 393	Students showcase their work Eng 393
5:00	5:00 Email 5:30 Team building acti∨ities (Lee)	Dinner	Dinner	Dinner	Dinner and Closing ceremony (Wei) Eng 285	Dinner and Closing ceremony (Wei) Eng 285
6:00	6:30 Dinner	Guest LectureGaby Aguilera, Luiz Mendes & Raquel Romano, Google	Student Panel	5:45 Guest Lecture Claudia Galvan, Microsoft		
7:00	7:15 Guest LectureDulce Ponceleón, IBM	Social ActivityOutdoor Game Night (Yu)	6:30 pm Social ActivityBowling, Billiards, & Table Tennis (Garcia)	6:30 Social ActivityMovie "UP" (Lee)		
8:00	7:45 Social ActivityBoard Game Night (Backer)	Social ActivityOutdoor Game Night (Yu)	Social ActivityBowling, Billiards, & Table Tennis (Garcia)	Social ActivityMovie "UP" (Lee)		
9:00	Social ActivityBoard Game Night (Backer)	Dorm (camp counselors)	Social ActivityBowling, Billiards, & Table Tennis (Garcia)	Dorm (camp counselors)		
10:00 to next morning	Dorm (camp counselors)	Dorm (camp counselors)	Dorm (camp counselors)	Dorm (camp counselors)		

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