

Biology of **HUMAN**

**Community Learning Center Club
Health and Human Rights
Fall 2016**

**Attendance Summary
and
Compilation of Weekly Write-ups**

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Community Learning Center Club: "Health and Human Rights"

Participation Summary and Compilation of Weekly Write-ups

Introduction

The Biology of Human ("BioHuman") project, funded by the National Institutes of Health (NIH) Science Education Partnership Award (SEPA), focuses on helping youth and adults understand themselves by exploring scientific principles that underlie modern research in human biology. Currently in its fifth and final year of a five-year grant, the project is creating innovative outreach materials for youth and families, educators and librarians.

One project goal is to generate greater interest in biomedical careers, particularly among youth. "*Health and Human Rights*" is one in a series of a semester-long science-themed afterschool clubs funded, designed, facilitated and staffed by the BioHuman project and offered through the local Community Learning Center at a public middle school. This collaborative outreach effort serves multiple purposes, not only offering rich, hands-on science experiences and face-to-face interaction with scientists for participating youth, but also providing the project with an age appropriate target audience to trial test project deliverables and get relevant timely feedback to make modifications.

Health and Human Rights was offered once a week after school during Fall 2016 at a local, Title 1 public middle school. Each session was 75 minutes, 4:15-5:30PM. The club was organized and run by a facilitator from the BioHuman project, Sara LeRoy-Toren, a retired high school science teacher and former Science Department Chair at the LPS high school Science Focus Program. One undergraduate sociology student, Grace Stallworth, and a retired Registered Nurse, Jeanine Kingsley, both assisted on a weekly basis as volunteers. Dr. Larry Gibbs, a professor in the Department of Sociology at UNL, also assisted on a weekly basis.

In the flyer promoting this club to students and their parents, it was described as follows: "Is health a human right? Explore our own physiology and health, using blood-pressure monitors, stethoscopes and other medical tools. Who has access to clean water, medical care, and a healthy environment? What kinds of health careers help others have better and safer lives? Students in this club will work with UNL experts in public health, social justice, and virology." This club and the description provided to promote it were created with the intent to be particularly inclusive of female students. Prior club offerings had tended to attract more male than female participants, so for the last two semesters (Spring 2016 and now Fall 2016), BioHuman staff were more deliberate in making the language and content of the club activities more welcoming toward girls. Research shows specific strategies can be used to make science and engineering activities more attractive to girls, including making the content more personally relevant (Ilumoka, 2012; Liben & Coyle, 2014; National Academy of Engineering, 2008; Thompson, 2014). This club's focus on both personal health and including activities about health careers, public health, and social justice were purposeful decisions to be made to make the club appealing to a broad demographic.

The club description also included the following information: "This Community Learning Center Club is supported by an outreach grant from the National Institutes of Health to the University of Nebraska-Lincoln (UNL). Students choosing to enroll in this club will be involved in evaluation and research by UNL to help improve and understand the impacts of this program." All data collected and evaluation conducted for this report was approved by the UNL Institutional Review Board.

Purpose

This report is designed to serve as documentation about the club participation, activities, and weekly facilitator feedback, and to provide some information about the student attendance on a weekly basis. The first section of this report describes the student participation in the club. Then, the initial planned sequence of weekly activities is provided. While changes were made as needed during the semester, this list provides the general themes and content of the club meetings. Last, the weekly summaries of the club meetings are included in their entirety. These include a summary of each week's actual activities, attendance information, reflections and comments of the lead facilitator, and the written feedback from all the participating facilitators.

Participants

The Community Learning Center (CLC) afterschool club *Health and Human Rights* met 14 times during the fall semester of the 2016-2017 school year. Weekly attendance ranged widely, from four to 26 students with a mean attendance of 11.1 students (with weekly averages of: 5.5 male, 5.6 female; 5.8 European American, 2.1 African American, 0.9 Middle Eastern, 1.6 Hispanic, 0.1 Asian, 0.1 Native American, 0.1 unknown/not reported), and median attendance of 9.5 students (see Figure 1). A total of 60 different students attended the club, with 26 students attending just one meeting and 5 students attending 6 or more of the meetings (see Figure 2).

Figure 1. Weekly student attendance at Health and Human Rights Science club

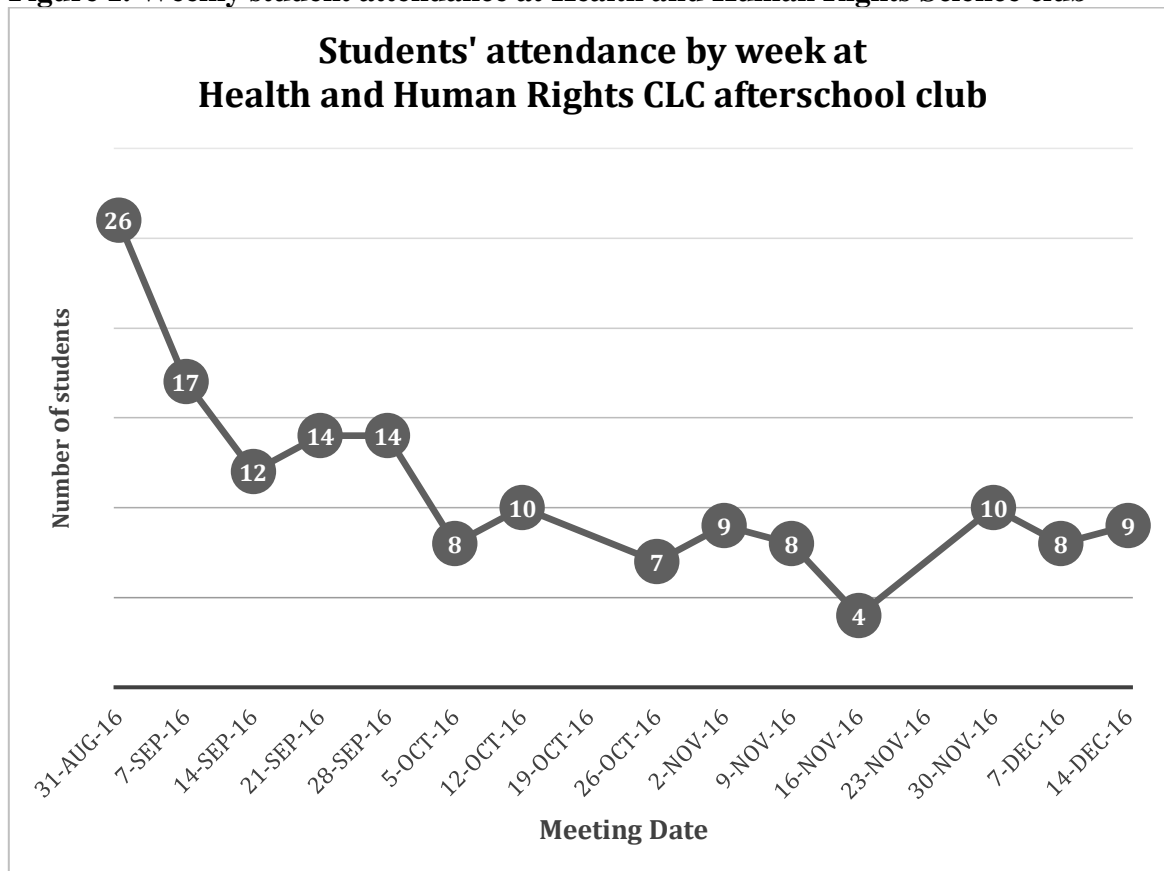
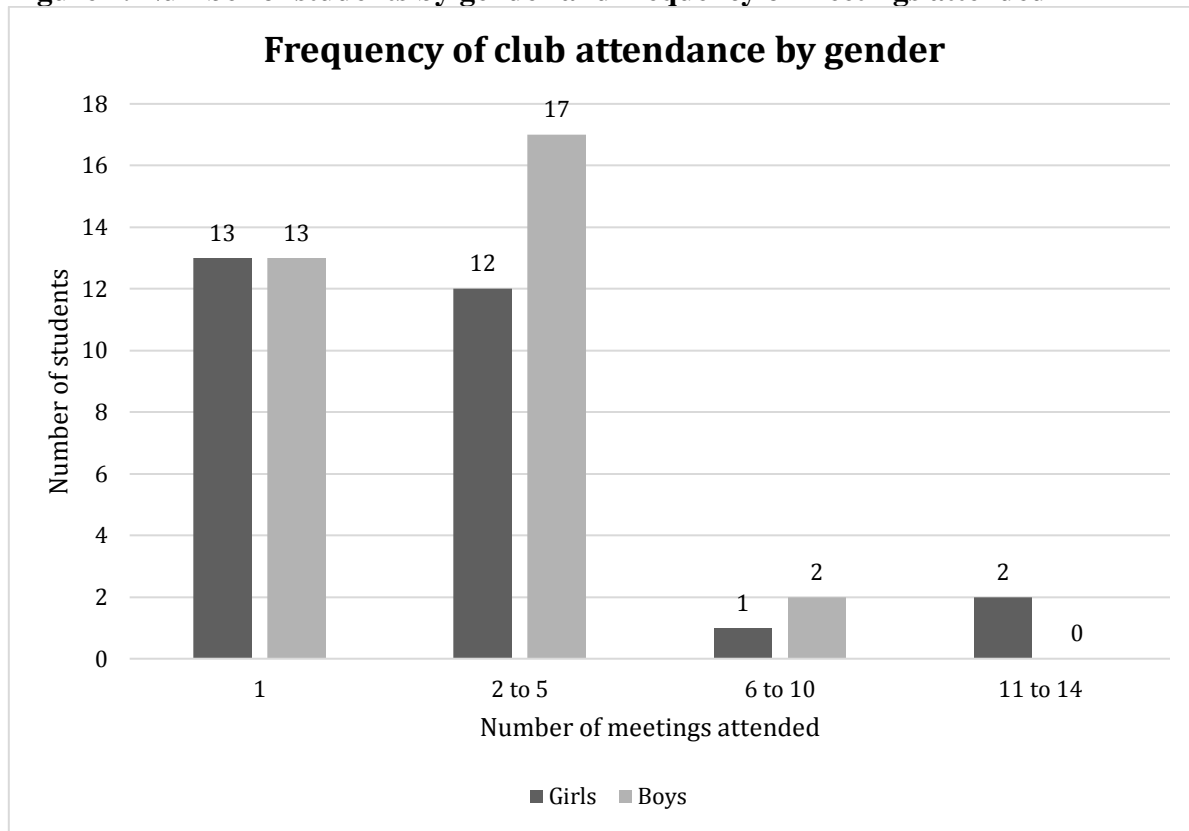


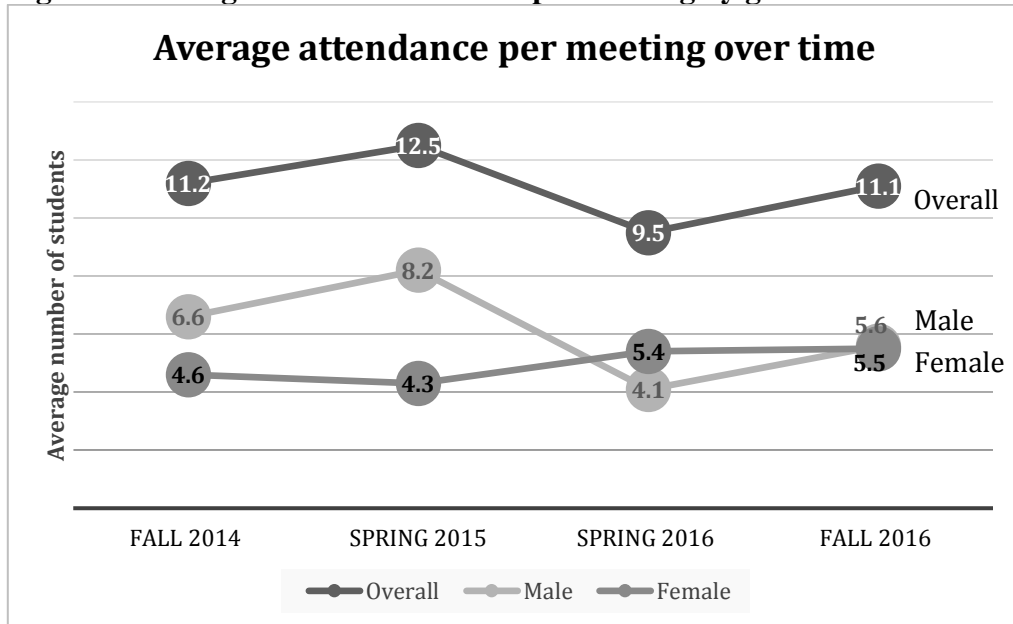
Figure 2. Number of students by gender and frequency of meetings attended



Compared to the prior offerings of BioHuman afterschool clubs, the total number of students participating was higher (60 this semester, 28 last semester), but the number of students participating frequently (6 or more meetings) was much fewer (10 last semester, 5 this semester). Girls participated, on average, at about the same rate as boys, however, it is interesting to note that the most regular, frequent participants (attending 11 to 14 meetings) were two females and no boys were in this same category of participation.

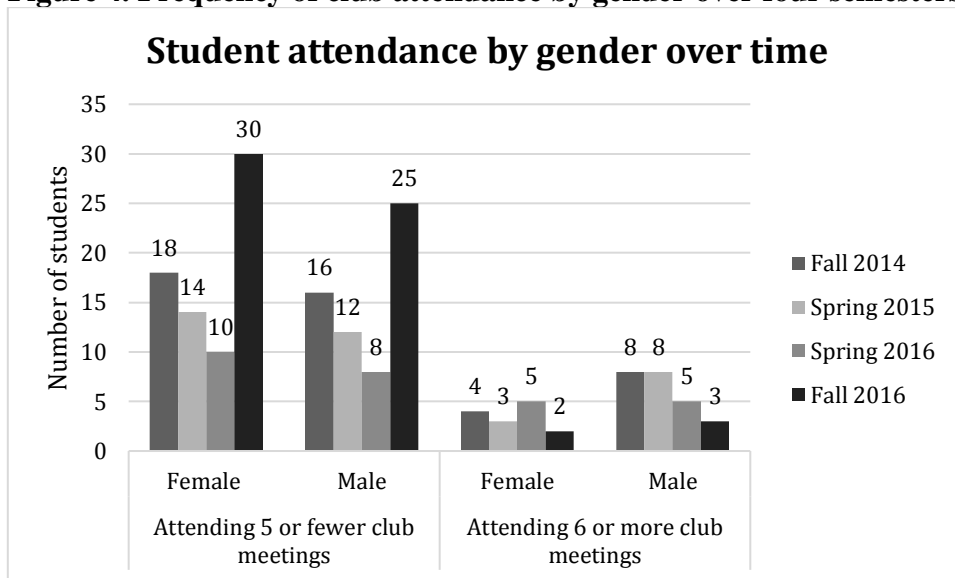
This is the fourth CLC club offering from BioHuman in which we kept weekly attendance records. Looking back across these four semesters, the total number of students involved in a given semester ranged from a low of 28 individuals to a high of 60 individuals. Attendance per meeting ranged from a low of 4 students to a high of 26 students. Average attendance per session in each of the four club offerings is shown in Figure 3, and shows an average of between about 9 to 13 students, and shows that while the first two clubs had higher rates of boys participating, the most recent two clubs have had more similar rates of participation of boys and girls.

Figure 3. Average number of students per meeting by gender over four semesters



Because of the variability in the attendance by different students, it's helpful to see how many students were "regulars" or consistent attendees. Figure 4 divides students into two groups, those who attended five or fewer meetings, and those who attended six or more meetings. The Health and Human Rights (Fall 2016) club had the largest number of students overall, but the fewest number of consistent attendees.

Figure 4. Frequency of club attendance by gender over four semesters



Many factors influence the student attendance at this club. Looking at club records over time helps illustrate the variance in afterschool attendance by participating students. This weekly variance poses a challenge in offering content of club activities that builds over time through the semester, but remains accessible to weekly newcomers. In addition, students arrive and depart from the club at widely varying times, so that some youth attend for the full 75 minutes, while others attend for a much shorter time. Students have a variety of other demands on their time, including homework assignments, participation in sports, and home responsibilities such as caring for

younger siblings. Other CLC clubs are offered at the same time at this school, and depending on the popularity of those clubs, they may also impact attendance at the BioHuman science club.

The BioHuman staff continue to work closely with the CLC coordinator at this school to attract and retain students in the club. Across the last several semesters, the BioHuman project has provided a consistent presence and opportunity for students to explore science ideas in a welcoming environment. See attached weekly summaries that follow for more details about programming and student reaction and feedback.

References

- Illumoka, A. A. (2012). Identification of Strategies that Overcome Barriers to Women and Minorities in STEM. *ASQ Advancing the STEM Agenda in Education, the Workplace and Society, Session*, 2–1.
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- National Academy of Engineering (Ed.). (2008). *Changing the conversation: messages for improving public understanding of engineering*. Washington, D.C: National Academies Press.
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Initial Planned Schedule

HEALTH & HUMAN RIGHTS. SARA TOREN COORDINATOR

Calendar 2016 Fall Semester Wednesdays 4:15-5:30 Working draft 9.12.16

August 31, 2016 Alike & Different

Introduction of facilitators, students, Description of semester activities

Discussion/interaction of phenotype identification

Wonderwise activity Genetic Counselor, Debrief

September 7 Exploring Our Health (Jeanine Kingsley RN)

Introduce medical technology, Activities with taking health measurements-semester long project

Work centered around the blood pressure monitors/some heart/vascular information.

September 14 Rights to Medical Care (Dr. Larry Gibbs)

Meet on Tuesday, 9/13 to discuss activities

Begin or end with blood pressure

September 21 Health Disparities (Dr. Gibbs)

September 28 Measuring Our Health (Jeanine)

October 5 Water Quality & You (Jeanine)

Discussion and activity with water quality in our home, state, nation, world. Flint Michigan example.

October 12 Water & Stupid Viruses (Dr. Dave Dunigan,)

October 19 (*Oct 18 LPS/UNL fall break*): *no club meeting*

October 26 Water in NE (Lindsey EPSCOR Mobile Lab)

November 2 Measuring Our Health (Jeanine)

November 9 Health Messages from Lincoln to Africa (Dr. Liz Van Wormer)

November 16 Parasites & War (Dr. Scott Gardner)

November 23 Thanksgiving Break

November 30 Viruses & Global Health (Dr. John West)

December 7 Student Planning and reflection for COL

December 14 Celebration of Learning At Morrill Hall in the evening

Weekly Summaries

Week 1

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 08312016

August 31, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Amy Spiegel, Dr. Larry Gibbs, Grace Stallworth

Student Participants:

August 31

12 Euro Americans

6 Hispanic/Latino American

6 African American

1 Native American

Total: 25 Students

Special circumstances: The plan for this day was to participate in health measurement activities, but our specialist was unable to fly back to Lincoln that day. Sara used the genetics activities from the Wonderwise curriculum instead. Another student club had too many students, so those students were sent to “Health and Human Rights” to try out the club. As our time went on, even more students arrived and it was difficult to keep track of numbers and coming/going. This was a challenge for our ongoing activities.

Activities: The day began with introductions of Bio Human staff members and Dr. Spiegel passed out the beginning of semester forms. We were not able to do student introductions as noted below in the “Assessment” section.

Students were asked to arrange themselves in groups of 2, and to observe one another’s phenotypes: hair/eye color, ear lobe shape/attachment, hair texture and tongue rolling. Differences and similarities were compared and discussed and students were active in contributing and commenting. We finished up with some cookies.

Assessment: This was an interesting day in terms of engagement. There were clearly a group who were engaged and also a group who were not (disappointed at not getting into the club of their choice). The in and out flow of students made it difficult to keep a coherent momentum with the activities, or even the introductions and we were scrambling to provide materials to our group members. It was clear that grouping the students was a good idea, and would need to be more intentional in the future. The addition of a special needs student highlighted the need for some school assistance with appropriate seating and table resources. This year has seen some significant change in the participating middle school, including a number of out of district ELL students. As the fall semester is a new school time for many, it is suggested that students have a bit more time to acclimate to school structure (3 weeks?) before CLC begins.

On the positive side, the team got to know a number of students, and many students had thoughtful and insightful observations. It was good to be back in the school and to have this opportunity to observe what changes would be important for the remainder of the semester.

Health and Human Rights, Middle Level Afterschool CLC

31 August 2016

Wonderwise Genetics: Alike and Different

Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "What club is this?"
- "What are we going to do?"
- "What color are your eyes?"
- "What is tongue rolling?"
- "Do I have dimples?"
- "What does recessive mean?"
- "Are my ears connected?"
- "Is this rolling my tongue?"
- "Do freckles on my arm count? Or do you have to have freckles all over your face?"
- "Is my hair curly or wavy?"
- "What do you mean by 'alike'?"
- "I don't like science"
- "I like science, so that's why I'm here."
- "I wanted cooking club."

What worked well with the activities?

- Introductions & talking about plans for the semester
- Partnering in groups
- Going around the room and actively engaging with students' questions
- The activity was accessible to all the students and they mostly enjoyed figuring out what characteristics they shared and didn't share.
- Having handout/worksheets
- Some of the data gathering
- Asking students engaging questions and giving suggestions to encourage writing; Some students had some very thoughtful ideas.
- Encouraging critical thinking

What changes would you recommend?

- Need more continuity with structure of the day --some students were disengaged.
- There were 26 students signed in, but in actuality there were more than that. Students came at different times, so need students to arrive closer together; Hard/disruptive to have students arriving and leaving at different times. Made it more hectic.
- We will need to decide on some rules and expectations for student behavior.
- Separating groups that are unproductive (through numbering, color organization)
- An excess of materials (just in case)
- Using a warm-up activity to get them engaged right away
- Allergy friendly snacks
- Maybe when going around the room getting student input, repeat what students say for everyone to hear since it was hard to hear some students
- Maybe bring class together to share out more often so they can process the big ideas of the activity.
- There is a student who will need accommodation relative to her size and condition, so have asked that an additional short table/chairs be located. This will alter how we partner/group participants for our activities. At this time, pods seem to be a solution, which might also cut down on some of the distraction.
- Recommend waiting at least 2 weeks in fall to begin club due to adjustment of students to school.

Week 2

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 09072016

September 7, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Amy Spiegel, Dr. Larry Gibbs, Jeanine Kingsley RN, Grace Stallworth

Student Participants:

September 7, 2016

7 Euro American students

3 Hispanic/Latino American

2 African American

3 Middle Eastern

2 Asian American

Total: 17 Students

Special circumstances: The blood pressure machines were not assembled before class. Not all the blood pressure machines worked and there were not enough charged batteries.

Activities: There were a large number of students that returned for this club. We began with asking the students to introduce themselves and talk about why they might be interested in the club.

Jeanine Kingsley, RN, was the facilitator for the day. She explained blood pressure to students, and demonstrated various places to feel a pulse. They measured their pulse both by hand and with the machines. The blood pressure machines were shown to the students, along with a demonstration on how to assemble them, then the students were given boxed BP machines to put together and try out. The students received notebooks to record their blood pressure and pulse measurements, and were encouraged to try the measurements again to verify their findings. An example of different ways to chart data was put on the board.

Assessment: This activity was the one intended to be the first activity, and it was very successful. Although there were machines that did not work, the opportunity to put things together and see how they worked was engaging. It helped reinforce the ideas behind vascular function in human beings. Having notebooks to record the health readings was popular, but it was clear with our numbers that we would need more notebooks. Nurse Kingsley did a wonderful job with the students, and the staff learned along with the club members. It was clear that the hands-on activities were very popular, and students stayed for some time after club was over.

Health and Human Rights, Middle Level Afterschool CLC
7 September 2016
Blood Pressure Monitors and learning
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "How does this work?" [assembling BP device]
- "What do I do?"
- "Can we start?"
- "What is it [the machine] measuring?"
- "My batteries are dead."
- "Should I wash my hands?" [after touching corroded batteries]
- "My mom and grandma have high blood pressure. Does that mean I will, too?"
- "Is this right?" [looking at a reading]
- "Where does this go? [assembling the monitor]
- "What do I write down?"
- "Can you help me?"
- "This [cuff] is too tight!"
- "It's not working."
- "What does this mean?" [numbers on the monitor]
- "I forgot the second number. Do you remember what it was?"
- "Is that okay?" [looking at monitor numbers]
- "What are we doing? I don't understand" [taking pulse: radial pulse]
- "Where do I get the pulse?"
- "If I multiply by 4 is that right?"
- "Could my pulse be 72?!"
- "What do I do now?"
- "Why would my numbers be like that? Is that normal?"
- "Is this what they do at the doctor's office?"
- "Where are the sticky notes?" [we marked the monitors that were not working]

What worked well with the activities?

- The interaction of the students with the equipment was very successful. Although there were machines that did not work, the opportunity to put things together and see how they worked was very engaging. It helped reinforce the concepts behind vascular function in human beings. This is an important experience for our students, and was well received.
- Students were interested in using the equipment and eager to get started.
- The arrival of the students was greatly improved over our first meeting, with all of them arriving at the same time, giving us some control over the sign in and sign out procedure; the meeting started off in a much more orderly manner with students arriving all together. Name tags were helpful. The students were attentive and interested; they listened well to Jeanine's introduction.
- Nice to have students introduce themselves and talk a little bit about their interests/activities.
- Good to have each student with access to their own equipment to put together and to use. They could help each other, but also were responsible for their own monitor and measurements.
- Good that students received hands-on experience using the blood pressure kits.
- Students learned something new or in detail about their bodies.
- Helpful that they were taught also to measure their pulse rate using their hands.
- Good to provide individual notebooks for each student to log their information.

What changes would you recommend?

- It might be helpful for the students to see an animated heart diagram, along with pumping arteries to envision what we are measuring. They will have had little or no contact with this information in their school lives. Otherwise, the learning went well with a positive outcome.
- The students were interested in knowing more about what the numbers meant, with several asking if their numbers were "okay." So it might have been helpful to talk more about what is a normal range, high and low ranges, and that it varies even from moment to moment, to give them more on what to expect ahead of time.
- It might have been helpful to give the students a bit more information about the whole planned activity at the beginning while they were all attending to Jeanine (before they had their equipment).
- Have students work in pairs.
- Always check equipment prior to class -- some batteries had leaked in storage and were corroded.
- Assume nothing -- students had heard of blood pressure, but many didn't know what the measurement meant or measured.
- The CLC para that was in the room had a walky talky that was much too intrusive. It is important to modify that. The sound coming from the device made it hard for us to communicate with the students. He also attempted to control one of our students, which was well intentioned but not needed with our staff.
- It might be helpful to have some extension activities that are open-ended so that students who get done with the primary tasks quickly can do some additional exploring of the equipment, concepts and/ or activities.
- After students are taught how to use the tool/kits, they could also try to re-enact how to use the kits with each other (i.e., have students teach each other).

Week 3

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 09142016

September 14, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

September 14, 2016

6 Euro Americans

2 African Americans

2 Asian Americans

1 Hispanic/Latino American

1 Middle Eastern American

Total: 12 Students

Special circumstances: Some difficulty with the Blood Pressure machines. The students who were attending were somewhat different than other times, so notebooks needed to be provided for them. Our facilitator for the day was delayed in arriving.

Activities: This day began with the students measuring their blood pressure and pulse after having obtained their notebooks. Nurse Kingsley and Grace Stallworth helped students as they came to the room and signed in. As we were waiting for our facilitator, Grace asked the students to write down 1 positive thing that happened today, and most complied.

Dr. Gibbs facilitated an activity with the students that explored access to healthcare, and the students created organizational posters that showed their ideas about how healthcare access was affected by social and economic factors. The students were given slips of paper that described a scenario such as "You are sick" or "You are Healthy", and then students talked with table groups about what that meant about their need for healthcare and how they could get healthcare. They had many thoughts and items to share about their perceptions of access to health care.

Assessment: Changing the blood pressure measurement to an individual activity as students arrived had a positive result. There was more personal interaction with the students and more time to train those who had not done this before.

This activity allowed the students to think about healthcare, but also provided important background for the staff in terms of understanding the students and their lives. Working in table groups and varying scenarios across the groups needed to be done in order to more smoothly run the activity.

Health and Human Rights, Middle Level Afterschool CLC
14 September 2016
Blood Pressure Measurement / Dr. Gibbs: Health Care Access
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

Checking BP/pulse at the start of class w/ Jeanine

- "Is that my blood pressure? Is that OK?"
- "Why is my blood pressure that high?"
- "What is my blood pressure?"
- "How do I write blood pressure and pulse down?"
- "Is my blood pressure okay?"

Dr. Gibbs

- Many comments and good discussion regarding access to health care
- "I live close to a hospital"
- "The hospital is a long way from our house."
- Students shared lots of personal experiences
- "I was a tough kid. My parent noticed a bump when I was six. When I was 12, they fixed a hernia. It still pops out."
- "I don't care -- there's always a cure [reference to identities written on cards for activity. Student had a card that had "you are sick" as the condition.]
- "How can you be 100 miles from a doctor?"
- "You have to have money to go to the doctor"
- Students discussed technological advances in health care and medicine, access to health care, advantages in accessing health care

What worked well with the activities?

- Checking blood pressures as the students arrived worked well -- since their arrival varies from 3:30 - 4:15, there is more opportunity for individual attention.
- Grace helped by asking students to write down one good thing about their day in their journals as we waited for things to begin.
- Index card with "identity" and descriptions; All students had a flash card that had different scenarios which allowed them to see different health outcomes; The activity designed to make students aware of access to medical care was interesting and students were mostly willing to contribute.
- Color coded materials.
- Prompting students with questions or new ideas as methods of engaging discussion; Open questions: why are there health disparities? and how to change access to health care; Having students explain the impact of accessibility & quality of care discrimination has on health
- Asking them their opinions on an issue.
- Incorporating writing ideas for journal prompts.

What changes would you recommend?

- The activity was well considered, but needed some organizational edits -- e.g., group as per activity, make instructions clearer, use table groups; Putting students in specific, organized groups; Mix up tables with identities varied
- The options on each card were perhaps too many, and made it a bit confusing for the participants.
- Add some pictures to the activity (for example, hospitals, doctors, etc.)
- Dr. Gibbs was delayed in arriving, so there was more opportunity for distractions to develop
- Transitioning from writing activity to a speaking activity, etc. to keep attention high
- Potentially providing snack (equal distribution in case individuals have snacks)
- We need to get more journals and batteries for the health measurements

Week 4

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 09212016

September 21, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

September 21, 2016

9 Euro Americans students

2 Hispanic/Latino American

1 African American

1 Middle Eastern

1 Asian American

Total: 14 Students

Special circumstances: Again, some students new to the group.

Activities: Blood pressure and pulse were taken as students arrived.

Dr. Larry Gibbs facilitated an activity exploring the ideas of health conditions affecting different ethnic/economic subgroups. The club members were seated at four tables and a facilitator was present at each table. The students were given a slip of paper with a demographic/ethnic group (Asian American, White American, African American, Native American, Middle Eastern American, Hispanic American) and asked to identify the health concerns of each ethnic group. They were given the papers to consider **before** telling them what the health disparities currently are and then asked to react after that and discuss their findings.

The students worked with prompts such as suggesting students discuss ideas; prompting students with ideas or thought processes. These strategies worked well and participation was high.

Members took notes in their personal notebooks. At the end of the activity, all table groups joined in a concluding discussion, sharing their ideas and listening to others' thoughts.

Assessment: The students participated freely and understood new concepts. They were able to write down what health issues they thought affected people by age, gender and race, and a number of them showed insight into the differences in availability of healthcare for different groups. Dr. Gibbs provided thoughtful answers to the students' questions, and the club meeting processed well. The availability of an adult leader at each table to facilitate this activity worked very well. This was a positive day for our CLC.

Health and Human Rights, Middle Level Afterschool CLC
21 September 2016
Dr. Gibbs: Activity Sheet on Health Disparities by Age, Gender & Race
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "What's my blood pressure?"
- "How do I test my blood pressure?"
- "How do you spell this?"
- "What does disparity mean?"
- "How do I talk about health issues of other races?"
- Just needed focus on table topic and they questioned each other regarding health concerns of assigned groups.
- "What is a famine?"
- "What is hypertension?"
- "What is mortality and morbidity?"
- "What is morbidity?...it sounds like mortality"
- "What does life expectancy mean?"
- "How do you get heart disease?"
- "How does high blood pressure affect your heart?"

What worked well with the activities?

- Separating into groups
- Each table of 4 was given paper with demographic/ethnic group (Asian American, White American, African American, Native American, Middle Eastern American, Hispanic American) and were charged with health concerns of each ethnic group; having the four tables with different activities and the same goal, and with a facilitator at each table worked well.
- Giving the students the papers to consider **before** telling them what the health disparities currently are. And then asking them to react after that and discuss.
- The students worked with prompts and the participation was higher; Suggesting students discuss ideas; Prompting students with ideas or thought processes worked well.
- Kids took notes; Students could write down what health issues they thought affected people by age, gender and race
- Students were able to participate freely and understand new concepts
- Reflecting on table discussion with whole class
- This class was dynamic and a peek at college for kids! They stayed engaged in the discussion.
- This session went well. There were a number of students who were new or had not attended the last meeting, but the participation was high nonetheless. Organization of the activities and the availability of four adults to work with the students was key.

What changes would you recommend?

- Taking more turns listening and talking within student and coordinator
- Coordinating for larger groups
- No changes!

Week 5

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 09282016

September 28, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

September 28, 2016

Euro Americans: 8

Black/African Americans: 4

Hispanic Americans: 2

Total Students: 14

Special circumstances: Mrs. Kingsley was late due to traffic issues, so we started later than planned (4:20).

Activities: Nurse Kingsley led a session on human pulse, taking a person's pulse, both manually and with a stethoscope, and heart anatomy/function. The students took their blood pressure as they had in the past, and got to use stethoscopes, which were new to them.

A video with an animated human heart beating was played for the group. Once again, there were table groups, and the activities of BP, manual pulse, stethoscope use and heart anatomy were facilitated by a leader at each table. This kept the students involved, and gave them quick access to answers for their questions. At each table, the students were paired up, and this made the measurements taken by the participants more manageable.

Assessment: This was a very positive meeting. Students are very interested in the health connected to themselves, and eager to have an expert help them learn. Jeanine Kingsley has a good manner with the middle school students as she teaches them, and is clearly an expert, which the kids recognize.

The physical organization of the room, as well as the recording of information in the personal notebooks are proving to be successful strategies. Again, student interest in these topics has been consistently high.

Health and Human Rights, Middle Level Afterschool CLC
28 September 2016
Nurse Kingsley - Stethoscopes/ BP measurement
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "Will we listen to lungs?"
- "What if it [heart] gets cut in half?"
- "What's apical?"
- "I brought my own [BP machine]."
- "Can I take my blood pressure by myself? I know how to do it."
- Students were interested in finding out what the heart reading on the B/P reading meant.
- "The base of the heart is on top!?"
- "Can I listen to your heart?"
- "Where is the apex of the heart?"
- "I can hear your heart!"
- "I don't want a partner for the heart!"
- "Can I measure my heart by myself?"
- "I can hear it!!"
- [Students] didn't really ask many questions that I encountered in my group.
- "Where do I get my heartbeat?"
- "We're partners [for the activity]."
- "I wonder how a stethoscope works!"
- "Is the club over? I don't want it to be."

What worked well with the activities?

- Had "cheat" sheet outline of topics.
- Introduction of new activity (stethoscope).
- Stethoscope activity was interesting.
- Heart video caught students' attention; Use of video at the beginning to introduce topic.
- Student were able to test their pulses using radial, carotid, temple.
- Students were variably involved in the BP machines and stethoscopes.
- Students got familiar with using the stethoscope.
- Running the activities on table groups allowed for more individual attention and management; Separating individuals into partners/groups at each table; Small groups with facilitator at each table.
- Discussed CPR and access to 911 -- encouraged taking CPR course.
- Discussed AED -- location.
- Asking students questions about what they hear or notice!!
- Reflection and wrap up -- asking student his opinion (student stayed after).

What changes would you recommend?

- N/A
- This week went really well! Separating the club into section (first BP, then stethoscopes) also helps keep students working/diligent, so perhaps I'd recommend organizing students in this way again.
- Possibly talk about diseases/ conditions
- Make up scenarios -- "What would you do?"
- There was a plan, but the activities were over by 5:00 -- could use more auxiliary activities.
- Main presenter was late, so set up was a bit later.
- With Homework Zone and Cross Country, a number of students arrive at 4:30, while another group leaves at 5:00. Another group stays as long as we are there. Need to think about structure flexibility?

Week 6

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 10052016

October 5, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

October 5, 2016

Euro Americans: 4

Black/African Americans: 1

Hispanic Americans: 1

Middle Eastern American 2

Total: 8 Student

Special circumstances: None.

Activities: As in previous meetings, we began with the students taking their BP and pulse, recording it in their notebooks.

The topic for the day was access to water, and the science activity began with a bank of basic water knowledge questions:

- Where does your water come from?
- What path does it take to get to your home?
- What might be in the water that comes out of the faucet at your home? If you use bottled water, what might be in that water?
- Could the things found in your water at home affect you? Does the amount of these things matter?

The student groups were seated at different table pods to enable a discussion with adequate room for thinking and writing. They were given the above questions on slips of colored paper, and prompted to write their ideas on each of the slips of paper. As a table group, they then organized their responses and talked about what they did and did not know, what they found important and asked questions. While this was going on, Grace circulated in the group, and interspersed the questions she had formed relating water knowledge to water needs and access for human beings. These are shown below:

1. Have you heard about social movements?
2. What do you think a social movement is?
3. Do you know about the events in North Dakota? (pipeline)
4. Why is access to clean water important?
5. Can you think of a social movement that is important to you?

This inquiry activity led to a talk given by Jeanine Kingsley about Flint, Michigan. She explained that she had grown up there, and showed pictures of Flint. The lead in the water in part of that city was discussed, and she explained about the effects of lead on human beings. The discussion that followed linked the students' work on the ideas listed above.

Assessment: The students showed a great deal of interest in the water supply. Many good questions were asked, particularly about where their water at home and school came from. They were able to synthesize the connection between social movements and water quality, and remained engaged throughout the club time. We could have stayed longer on this day if our students did not need to be picked up from school. The day also highlighted a need for more water education opportunities.

Health and Human Rights, Middle Level Afterschool CLC
5 October 2016
Social Movements/ Flint Water Activity
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

Lots of good questions and comments about origin of water supply:

- Why would the government do that? [corruption in Flint, MI]
- Why did the government make the decision to change to water supply from Detroit to Flint without considering the people and babies?
- Why put pollutants in water supply?
- Why, when they knew about water problem, didn't it stop?"

Questions/discussion about our aquifer:

- Where does our water come from?
- The Nebraska Aquifer [In response to, "Where does your water come from?"]
- I think we have an aquifer -- the Nebraska Aquifer
- The pipes
- The faucet
- Why does Lincoln water come from Ashland?
- How is there lead in the water?
- Could the problems faced by the Flint residents happen in Lincoln?

In response to question about how much teaching/ learning about water had occurred in school

- They sort of talked about this in elementary. I don't want to sound dumb.
- That cycle thing: condensation, evaporation, rain...
- Can I talk about water in Syria? I left when I was 5.

What worked well with the activities?

- Everything!; It was a good class! Small class.
- Grouping by table; Splitting into groups; Small table groups
- Writing down aspects of the activity on paper, presenting those ideas to the group, discussing in groups, encouraging student ideas; The card sorting/discussion activity allowed for student participation, exploration; The children were able to write and draw their responses related to the water question posed; Worked through four questions.
- Short slide show and description of Flint from Jeanine was very helpful and well-received; Presentation of Flint, MI tragedy (geography/ corruption/ you can make a difference)
- Questions/discussion of social movements were interspersed in the activity. Grace did a good job of crafting the questions, and she and Larry helped apply the questions to our activities.
- Students also were able to express themselves in front of the class; Made presentation from each table

What changes would you recommend?

- Very happy with this meeting today!; Nothing
- The students were highly engaged and participated very well; This group was lovely and very engaged.
- The facilitators continued to create a relationship with the club members which was shared after the meeting.
- Having small groups (even within a larger number of students)
- It is abundantly clear that this group (students) needs water education.
- More time! Kids stays engaged till 5:25 PM.

Week 7***Health and Human Rights*****Middle School Community Learning Center (CLC) Club****University of Nebraska Museum SEPA grant BioHuman****Activity Report 10122016****October 12, 2016****BioHuman staff:** Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth**Student Participants:****October 12, 2016**

Euro Americans: 5

Black: 3

Hispanic/Latinos: 1

Middle Eastern: 1

Total: 10 Students**Special circumstances:** None

Activities: The activities today included continuing to monitor blood pressure and pulse, and record these in the student's notebooks, followed by a presentation and activity facilitated by Dr. David Dunigan on the Stupidity Virus.

Dr. Dunigan created a Power Point to explain viruses, and the chloroviruses his lab studies. After that presentation, the students gathered around 3 computers with attached DinoLites to observe the platyhelminths who consume the algae that host the viruses. Students exchanged sealed petri dishes of water with the free living helminths, and were able to see some of the processes in the lifecycle of the virus through the DinoScope projection on the computers.

Assessment: Having BP/pulse measurements at the beginning of club continues to provide a useful strategy for beginning CLC. Students are occupied and less inclined to be distracted. The PPT presentation was well crafted and interesting, but lost most of the students as time went on. Attention to presentation late in the afternoon is difficult to achieve with middle school students. There was a significant change when the water and microscopes came out. When the activity with the Dinolites began, the engagement increased exponentially. They were excited and very enthusiastic. With the use of the digital microscopes and image capture on the screen, some of the activities that the lab had never seen were evident. Dr. Dunigan and the students were all excited about these new views.

Debriefing the group was productive, and further served to reinforce the importance of active engagement for students. Dr. Dunigan observed this at the end of the session. Dr. Dunigan was generous and kind during the session, and made this a particularly good experience for all involved.

Health and Human Rights, Middle Level Afterschool CLC
12 October 2016
Dr. Dave Dunigan - Presentation and DinoLite Activity about Chloroviruses
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

At beginning of class, using blood pressure machine:

- "How do I use the blood pressure machine?"
- "This isn't working."

Dr. Dunigan asked: *What do you think is big?*

- "me"
- "the universe"
- "the solar system"
- "ocean"
- "world"
- "house"
- "economy"

What do you think is small?

- "stars"
- "molecules"
- "my pencil"
- "an atom"
- "germs"
- "cell"
- "DNA"

What do you know about viruses?

- "they're small"
- "they kill you"
- "they affect your body -- I'm talking in a neutral connotation"
- "some might be neutral"
- "some are good, some are bad, some are neutral"
- "they make you sick but not dead"

Other comments/questions during discussion about viruses:

- "how can viruses be good?"
- "what do viruses do?"
- "how do you treat mental illness?"
- "can mental illness pass down from parents?"
- "where was stupidity virus discovered?"
- "is this the stupid virus?"

Comments during microscope activity:

- "I see it!"
- "It ate it!"
- "It's dead -- it's not moving"
- "This is cool!"
- "Look at my hand!"
- "Is that the table?"
- "Look at my pictures!"

What worked well with the activities?

- Using the B/P activity at the start of each session is a good tool to get students engaged

- Very interactive - Dr. Dunigan did a great job engaging students and getting them to participate; Dr. Dunigan is very friendly and generous man and the students appreciated his work.
- This activity was divided into two parts, the first of which was a power-point presentation, then followed by an activity observing aquatic animals in a sample of water. These animals are hosts for the chloroviruses studied by Dr. Dunigan's lab.
- With some exceptions, the students were attentive and quiet during the presentation. When the activity with the Dinolites began, the engagement increased exponentially. They were excited and very enthusiastic.
- Definitely using the microscopes and organizing into groups; Students were able to see the organisms using the microscope; Use of microscopes to view live pond creatures; they enjoyed looking at the tiny organisms with the Dinoscope.
- Creating times for discussions and asking students questions that build upon each other; Good questions from students.
- Students learnt that viruses can be good and bad
- Exciting to see an aspect of science that is just being published; Having Dr. Dunigan talking about up to the minute research.
- The day ended very well with a lot of enthusiasm.
- Fascinating topic. Wish more students could have experienced this.

What changes would you recommend?

- Having students stay the whole time; use the bathroom before they arrive
- We should have begun the activity sooner; Maybe if we could get to the microscope work sooner?
- There was lots of preparation to understand the sequence of the science discovery and significance of the organisms -- I'm not sure many of the students understood what they were looking at and why it was important.
- PPT is seldom engaging for students and activity is usually engaging; perhaps use an interactive slide show when presenting information;
- Presentation could be a little more simple but it was very informative
- Efforts to persuade our very generous guest experts that we need *activities* is continuing and reception of that idea is mixed. Continuing to work with our volunteer to provide activity-based session is important.

Week 8

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 10262016

October 26, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Grace Stallworth. Jeanine Kingsley was not present today.

Student Participants:

October 26, 2016

6 Euro Americans

1 Hispanic/Latino American

1 African American

1 Middle Eastern American

Total: 9 Students

Special circumstances: BP machines continued to have problems.

Activities: Drawing Superhero Stories with Bob Hall

As before students signing the roster went directly to read and record their BP and pulse. The BP machines were not working well, which led to some distraction.

This club activity centered around connecting the science and social health events we have examined this semester with expression through art. Bob Hall is a calm and resourceful facilitator, and the students were instructed to draw a "Superhero" depiction of themselves, and then place that character in context with their life experience and reflections on how our semester work might connect with that.

Assessment: Bob overcame the routine protest from our students that they cannot draw, and they settled down to listening and drawing their Superheroes and stories. He is an excellent and calm facilitator for students.

This activity was a good "reflection" activity for both the students and facilitators. It allowed the students to share things about their thoughts and lives in a safe space, and gave us more understanding of the effects of our work with this group.

We have fewer students on this day, and it looks like we were suffering from competition from other clubs and students needing to do work at home.

The activity was pretty much finished by 5:10(a bit short in length), but a few stayed around to talk about their drawings. This does point out some of the struggle to get the right amount of activity ready for club days, and highlights some of the difficulty in managing guest facilitator's planning.

Health and Human Rights, Middle Level Afterschool CLC
26 October 2016
Bob Hall: Drawing Superheroes
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

At beginning of class, using blood pressure machine:

- "Why don't these work?"
- "This isn't working."

Drawing:

- "What should I draw?"
- "I can't think of an idea."
- "I'm really creative!"
- "Look at my monster!"
- "Can you tell what this is? It's a PIST(?) - Pretty Intelligent Super Thing"
- "I've never drawn with the side of my pencil." [in response to a drawing suggestion by Bob]
- "I like supervillains!"
- "Do we keep these drawings (put in notebook)?"

What worked well with the activities?

- Quiet listening while Bob draws and demonstrates; Students were attentive to Bob's brief illustrations and suggestions for drawing.
- Students were happy to do the activity; The students appreciated the opportunity to be creative.
- Allowing students to be creative by combining monsters with themes we've discussed in class; Students were able to use their imaginations and draw anything related to what they have learned over the past weeks of the club. A few students drew heart related pictures.
- They liked the switch from superheroes to supervillains.
- We had a student from the first meeting return and that was positive.

What changes would you recommend?

- The blood pressure machines were uniformly not working -- have taken steps to check them over. Our expert was not at club that day (new grandchild being born).
- Our attendance has gone down. Cooking club has opened again, and a couple of students have needed to leave CLC for family reasons (caring for younger siblings).
- Really need to work on activity creation with all our presenters.
- Remembering to allow students to take turns and raise hands.

Week 9

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman Activity Report 11022016

November 02, 2016

BioHuman staff: Sara LeRoy-Toren, Jeanine Kingsley, RN,

Student Participants:

6 Euro Americans

1 Hispanic/Latino American

1 African American

1 Middle Eastern American

Total: 9 Students

Special circumstances: Larry Gibbs and Grace Stallworth were absent today.

Activities: This club meeting centered around further learning about human health measurements and was led by Jeanine Kingsley, RN.

In addition to the blood pressure and pulse measurements taught and practiced in previous meetings, Jeanine introduced pupil checks with a flashlight. We discussed how eyes work and talked about the difference that light and screens can make to vision. The difference between near and far sightedness, presbyopia and astigmatism was explored and demonstrated through looking at diagrams of eyes and lenses as well as Sara's glasses.

The students took turns working with each other on pupil response after viewing a demonstration with Sara's pupil response. All observations were recorded in the journals. At the end of the club meeting, the attendees were competent in taking pupil checks, pulse and blood pressure.

Assessment: This meeting went very well. The interest in taking health measurements and keeping a journal has had a sustained effect on both the long and short term club members. Although there was another activity planned for after the measurement component of this meeting, the enthusiasm of the students carried us to the end of our time.

Although there were only 2 facilitators on this day, we were both able to answer questions and listen to the students' self reporting. It was a very positive day.

Health and Human Rights, Middle Level Afterschool CLC
2 November 2016
Medical Technology: Pupil checks w/ penlights & heart sounds w/ stethoscope
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "I'm going to try this [BP machine]"
- "This is how eyes work!"
- "Look at that [pupil in light]! Do mine do that?"
- "If my eyes get smaller, it's because I'm just like that."
- "I read when I'm on restriction. It makes the time go faster. Otherwise I like to play my video games [response to "what do we use our eyes for?"]
- "Is that okay?" [blood pressure reading]
- "Does anyone have a calculator?" [student interested in average BP over the weeks]
"Oh, that looks alright!" [student sees calculation of average BP]
- "I'm freaking out!" [student hearing heart beat through stethoscope for first time]

Students, in general, like to "tell" more than ask questions.

They asked a few questions about head injuries and concussions.

What worked well with the activities?

- The interaction of the students with the BP machines, stethoscopes, and lights for pupil examination was very well received; Checking each other's pupils; Listening to hear sounds with stethoscopes
- There were a number of students who were present for the first time or were intermittent attendees.
- Sara's drawing to explain physiology/ anatomy one-to-one [was good].
- Sara had created an activity to build heart models, but the students' interest guided us to stay with those measurement activities.

What changes would you recommend?

- It would be great to have consistent group of students, but understand the difficulties of that.
- We were short-handed today (one individual let me know on Monday, but was not informed by the other until 30 minutes before club began), which worked out fine because of the interest in the health measurement activity. If we had proceeded with the heart building activity, we would have needed at least 1 other person. Need to know in advance if staff will be absent.
- CLC at this middle school has been struggling (per discussion with Troy Mack) and attendance is down. This is reflected in our varying attendance and is the present "new normal."

Week 10

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 11092016

November 09, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

November 09, 2016

5 Euro American Students

1 Hispanic/Latino Student

1 Black/African American Student

1 Middle Eastern Student

Total: 8 students

Special circumstances: This was the day after the national election. Anxiety was very high in the school. Many the group members checked in around 4:30, so we needed to backtrack a bit—the beginning had been delayed a short time already.

Activities: Land/water resources, rights to land/water, Dakota Access Pipeline connection

Students checked and recorded their blood pressure as they came in the door.

The meeting began by asking where our water comes from and how far away that source might be. A map of the Platte and Missouri River basins was shown, and a brief description of water basins was discussed.

The students were then given 2 sheets of paper, tape and water soluble markers, and shown how to make their own watershed model, based on the Wonderwise activity. After the students constructed their mountain ranges, drew in supposed river courses and continental divides, the models were sprayed with water to see if their hypothetical waterways were correct.

Following the river basin construction, the group was divided into two, and given a scenario and game pieces to “bargain” for their needs. The 2 groups ended up being ranching landholders with land, little water, and economic power and an indigenous group with land, water, and little economic power. The questions of “how much water do you need?” and “can you live without water?”, as well as “what about the downstream users?” were introduced into the students’ process.

Ultimately, the 2 groups negotiated for their needs, and agreed that water was a fundamental right.

Assessment: This activity was well received by the students. They remained very interested in the scenario activity, and several saved their watershed models. They were found hanging on hallway bulletin boards at the next week’s meeting. This meeting was very hands-on and the reduction in stress after the election results was visible.

This is a reinforcement that facilitated activities are significantly more successful, and perhaps an indicator that scenario based activities are attractive in their relevance to the students’ lives.

Health and Human Rights, Middle Level Afterschool CLC
9 November 2016
B/P monitoring/ River Basin Models, Resource Management (land & water)
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "Show me what to do" [paper model of river basin]
- "Do I need to fold the paper?"
- "Does it matter how I crumple paper?" [paper model]
- "Does x have a book?"
- "What's a continental divide?"
- "I know what a continental divide is! I listen in science class!"
- "How do I make this?" [paper model]
- "Do we use blue for the rivers? Does this look right?" [model]
- "What colors should I use?" [paper model]
- "We get our water from underground rivers."
- "This is all we have?" [comment on game pieces used as land/water in resources game]
- "These can be stolen!!" [comment on game pieces representing treaty rights to land/water]
- "We don't have enough water!"
- "There are a lot more people living on this land than on theirs!"
- "This was fun" [resource management]
- "This decision is hard!" [resource management]
- "This activity was fun/ hard" [resource management]

What worked well with the activities?

- Tracking blood pressure
- Splitting into groups
- Models were interesting to the students with "Aha!" moments. Geology and watersheds were engaging, and all were enthusiastic.
- Topographic models worked well for sure re: water; Students were able to make their own mountains and draw the lines where they thought the river would go/ run; They were able to spray their craft (mountains) and see the flow of water.
- The land/water game captured their imaginations. There were excited and often insightful discussions, some loud but productive. The decision making ended up being timed, which was a useful strategy.
- Students loved strategizing about land and water resources; Sara brought home the real life issues re: Native Americans.
- Students stayed till 5:30 to figure out solutions -- which they did!
- Cultivating an activity where students work with others but have autonomy in their specific choices.
- Allowing students to make choices in significant groups.

What changes would you recommend?

- I might have liked a bit more time with the whole group (some showed up at 4:30) but we got 100% participation. It would have been good to start timing the decision-making intervals sooner to move the activity along.
- Creating an activity to not get students too riled up, but still encourage excitement.
- No changes.
- NOTE: This was the day after the election and there was a great deal of anxiety in school.

Week 11

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 11162016

November 16, 2016

BioHuman staff: Sara LeRoy-Toren, Larry Gibbs, Grace Stallworth

Student Participants:

November 16, 2016

Black American Student: 1

Euro American students: 3

Total: 4 Students

Special circumstances: There were very few students on this day. Our scheduled scientist was unable to be at the meeting, so Sara filled in on the parasite activity. Jeanine Kingsley was unable to be at the meeting. Sara had a blood pressure cuff for the students.

Activities: The students present took their blood pressure and recorded it.

A discussion about parasites ensued, asking students what they thought parasites were, and if parasitic disease made a difference in the lives of communities affected. Dr. Gibbs helped connect the social considerations of poverty, parasite (illness) load and societal effects on populations.

Grace and Sara explained the physiological impact that parasites can have on the human body, then the students were given scenarios that described parasitic disease in a person. There were 2 scenarios available, and each group got 1 of them. The challenge was to look at the symptoms shown by the patients, and to diagnose their parasitic disease. Information sheets (from the CDC) were available and students were told they could use their devices to look up further information. The parasites represented were tape worm *T. saginata*, and ascaris worm, *Ascaris lumbricoides*, and the 2 student groups successfully identified the disease in each of their scenarios.

There was a good, concluding discussion on parasites and parasitic disease at the end of the meeting, and this took us to 5:30pm. The students were excited to talk about the topic.

Assessment: This meeting, although with a small attendance, was well received. Again, a specific activity with student choice of direction in learning worked well, and the different lenses (social, economic, physiologic and pathologic) through which parasitic disease was described seemed effective.

Health and Human Rights, Middle Level Afterschool CLC
16 November 2016
Parasite Lifestyles
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "A parasite is a virus?!"
- "We looked at those in the microscope!"
- "Parasites are cool."
- "Where does that end up?" [tapeworm]
- "When do tapeworms settle in our body?"
- "How are tapeworms transmitted from humans to animals?"
- "Maybe you get it from eating?" [tapeworm]
- "Why are we less concerned about our meat now than in the past?"
- "I'm confused by what this means" [when asked what happens to meat -- that you have to cook it to keep it safe]
- "I can't figure out the answer! [about cooking meat to make it safe to eat]
- "Parasites are gross."
- "We don't have those there because it's too cold!"
- "People put waste on crops!!"
- "Eww, that's gross" [talking about sewage treatment plants]
- "I want to be the cow!" [when role playing]

What worked well with the activities?

- Talking with each student
- Small numbers of students meant better teacher/student ratio
- Describing the way parasites work and how the place a person lives affects their likelihood of contracting parasites.
- Encouraging critical thinking
- Students were given activity sheets with different scenarios, and they were able to critically assess what was wrong with the patient
- Pictures incorporated for identification

What changes would you recommend?

- Our student number is dropping precipitously. Apparently, this is happening in other groups as well. Things that have social context seem to be of greater interest right now, so we are making a big effort to connect the science with "so what does this mean for people?"
- N/A

Week 12

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 11302016

November 30, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

November 30, 2016

5 Euro Americans Students

1 Middle Eastern Student

1 Asian American

2 Black Students

1 Hispanic Student

Total: 10 students

Special circumstances: none

Activities: This club meeting was facilitated by Dr. John West, Dr. Peter Angeletti, Dr. Salum LaDenge and Danielle Shea, a team of Virologists, from the Morrison Virology Center at the University of Nebraska.

In keeping with our emphasis on human health, the topic explored was the HPV virus. The major activity was a guided discussion with the students. The 3 questions put to the club members were: What is cancer? How do we get cancer? What can we do to prevent cancer? The students were very engaged as Drs. West, Angeletti and LaDenge answered questions, proposed solutions and suggested pathways for cancer prevention.

They explained unregulated cell division in accessible terms, and how cancer becomes metastatic. Students were encouraged, and did, talk about their experience (if they had any) with family members who had cancer, ask about how HPV could be prevented and explain that they had been immunized against HPV. The session was well attended and students reacted well to the format.

Assessment: This meeting went quite well. Dr. West has had a history of working very successfully with our club, and this was no exception. The impact of a scientist who can make science accessible is very high with these middle school students. Dr. Angeletti is also impressive with these young people, and Dr. LaDenge provided a great example of a medical doctor who is working on disease prevention research. Danielle Shea was helpful in modeling understanding of virology and research

These scientists clearly made an impression on the students, and shared their work in a way that left a lasting, positive impression.

Health and Human Rights, Middle Level Afterschool CLC
30 November 2016
Dr. West and colleagues, "Cancer"
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

- "What is allergens?"
- "What causes cancer?"
- "What would happen if the 'green light' (body telling cancer to grow) would stop?"
- "Cancer is abnormal cell growth" [in response to "what is cancer?"]
- "Cancer is mass of cells" [in response to "what is cancer?"]
- "Does pollution cause cancer?"
- "Now I know more about cancer"
- "I should go see a doctor"
- "Do allergies cause cancer? Oh, inflammation!"
- "HPV is a sexually transmitted disease."
- "In the most respectful way, I will explain why it is good to have the shot for HPV vaccination. When you get married, and get into the sex part, it protects you and your wife."

What worked well with the activities?

- The presenters were very engaging and asked the students questions which caused them to think; Asking questions to students; Dr. West and team used huge white board with questions, 1) what is cancer? 2) how do we get cancer?, 3) What can you do to avoid/prevent cancer?
- Collaborative activity with students -- respectful of students' thoughts.
- Facilitators were enthusiastic, comfortable and listened carefully to students' questions and concerns
- Students were able to write out the answers
- Encouraging independent thinking
- Engaged kids nicely
- Explanations of cancer were age/learning appropriate and accessible for student understanding

What changes would you recommend?

- Activities were students can engage with each other.
- Encouraging students to ask questions.
- None, Dr. West and team were great.
- None

Week 13

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman Activity Report 12072016

December 7, 2016

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth

Student Participants:

December 7, 2016

2 Euro Americans Students

1 Middle Eastern Student

4 Black Students

1 Hispanic Student

Total: 9 students

Special circumstances: None

Activities: We began this meeting with a video/slide show compiled of pictures staff had taken of each club meeting. The video was well received—the students really enjoyed seeing themselves in the club activities. This montage of images was used to preface the main activity of reviewing the semester and organizing the event to be held at Morrill Hall. This event had been “advertised” throughout the semester, particularly in November.

Students were given envelopes with slips of paper that each had the name of a meeting topic. All topics covering August through December were present, and the students were asked to choose their top 5 topics of interest. The two groups prioritized their preferences and 4/5 of the topics matched. As the discussion ensued, the group decided to do a Health Check theme for the Celebration of Learning, including the blood pressure, pulse and pupil checks.

The students demonstrated that they could do a pupil check as a review; pupil checks fascinated the students – Jeanine reminded them what pupil changes/ reactions reflect. Many students indicated they wanted to come to the Celebration, and would fill out the paperwork with Troy to help us get an accurate count. Additionally, the students actively recruited at Homework Zone and our alums brought people with them.

Assessment: Students in our club find looking back at the semester interesting, and this happened again. One of the comments was that they had “been there” or “missed that” as they viewed the video. The inconsistent attendance of individuals was a hallmark of this semester, and the students recognized that.

Sorting/prioritizing proved to be a good reflection and organization activity. The club members clearly learned this semester, and once again, show a high level of observation and recall. One of the big ideas clearly demonstrated is that the weekly health checks provided strong continuity for the group. This is a translatable skill for their outside lives and was evidenced by the strong interest within our group.

Health and Human Rights, Middle Level Afterschool CLC
7 December 2016
Planning for Celebration of Learning
Facilitator feedback, summarized by Amy N. Spiegel

Student comments/questions:

Students wanted to know about the end of the year event at Morrill Hall; Questions about Morrill Hall field trip

- "Where are we going?"
- "I need to get the form in."
- "Yes, I'll be there."
- "I have swim practice"
- "Is my blood pressure good? What is good blood pressure?"
- "Why do my pupils change?"

What worked well with the activities?

- Video was well-received; They enjoyed the video that Sara shared; Viewing video of semester
- Students were given envelopes with all the topics covering Aug-Dec and they chose the top 5 to present at the end of term event; Prioritized and reminisced about past topics; Two groups prioritized their preferences and 4/5 matched.
- They were able to do pupil check as well; Pupil checks fascinated students -- reminded them what pupil changes/ reactions reflect.
- Many indicated they wanted to come to Celebration.
- We actively recruited at Homework Zone and our alums brought people with them.

What changes would you recommend?

- Attendance is still erratic, so it was a bit loud. I do not think any changes need to be made at this particular meeting
- N/A

Week 14

Health and Human Rights

Middle School Community Learning Center (CLC) Club

University of Nebraska Museum SEPA grant BioHuman

Activity Report 12142016

December 14, 2016; Celebration of Learning

BioHuman staff: Sara LeRoy-Toren, Dr. Larry Gibbs, Jeanine Kingsley, RN, Grace Stallworth, Troy Mack, Dr. Judy Diamond, Dr. Amy Spiegel, Dr. Julia McQuillen, Dr. Trish Wonch-Hill, Emma DeVries (volunteer)

Student Participants:

December 14, 2016

EuroAmericanStudents: 5

Black Students: 2

Middle Eastern Student: 1

Hispanic/Latino Student: 1

Total: 9 students

5 parents and one nephew of a club member

Total: 6 family members

11 Biohuman staff

Special circumstances: This celebration was held in Mammoth Hall at the UNL museum

Activities: This celebration included showing the students video of their club activities, and there were activity tables that the students set up to demonstrate blood pressure monitoring, pupil checks and pulse checking. The students organized themselves into groups, and took turns staffing the activity table and looking at the museum.

Our grant team was introduced, along with Jeanine Kingsley, RN, and thanks was extended to all for their participation. A light sandwich supper was provided by Dr. Diamond, and the grant. Troy Mack transported the students to the museum, who were then picked up by parents. One student was taken home by Sara.

Assessment: It was a different experience for the students and the CLC staff to have a Celebration of Learning at the museum. We have long mulled over ways to include more parents, and the attendance of parents was not large. The parents who did attend have students that are very loyal to the club, including 1 new student that has subsequently attended faithfully in the spring semester. An attendance of 9 students at the end of the semester is a fair number, considering the vacillating attendance last semester.

This event was somewhat complicated to plan, and may not have been as well attended as we had hoped. I do think that it was important to the students who did participate: they are still at this semester's club (Being Human) Spring 2017. It gave our grant team another way to view the club as well. The process of considering what might be a positive and well attended Celebration of Learning continues.

NOTE: No facilitator feedback was collected for this meeting.