

UNC Chapel Hill NC-MSEN Pre-College Program

Saturday Academy

Session I was held October 1 through November 19, 2011. Middle school students took classes in mathematics, science, language arts and competition prep. High school students took classes in mathematics, science, language arts and careers.

The middle school students worked on writing (persuasive and technical) and public speaking. Students worked on math skills through brain teasers and math games. They focused on fractions, algebraic expressions, probability and problem solving. In science, students learned about airbags, acids and bases, plate tectonics and performed an egg drop experiment. The competition prep class introduced students to MSEN Day and Science Decathlon competitions. They had to use the scientific method and collaboration skills for these activities.

The high school students worked on SAT verbal skills and

test taking strategies. They did research on the Northern lights and prepared a presentation that would be recorded during Session II in the Language Arts class. The final presentation will be loaded on the ICAN SPACE website. In the Careers class, students continued to explore the CFNC web site using career, learning and personality assessments. The 11th/12th graders also focused on college research. The science classes worked on electromagnets and the 11th/12th grade students worked on an idea for a science experiment to be conducted in a microgravity environment on the International Space Station for the You Tube Space Lab. There were obstacles beyond the students control in getting the idea videotaped and submitted. The SPACE students activities are listed in the SPACE Updates section.

Session II started January 14 through February 11th. The special events planned for session II are Dr. Martin Luther King Jr. Birthday Celebration and Health Girls Save the World Presentations.



Session I Activities



Session II Activities

Parent Academy

Parents met November 19th for the elections of PIE Officers, PIE Club discussions and activities - STEM and Team Building. After the officers were elected, the parents discussed how the PIE Club would be organized and what tasks the PIE Club would work on. In the team building activity, parents made a totem pole of animal pictures that best identified the strengths of the group. In the STEM activity, parents had to work as a team to build an item that would transport a ball from one cup to another cup.

On January 12, 2012, the parents met again to work on the short term goals for the PIE Club. The goals of the program are to find different ways promote the program, find ways to encourage more parents to participate and to raise money to expand UNC Chapel Hill NC-MSEN Pre-College Program opportunities.



Parent Academy – November 19, 2011

FIRST Team #3331 Tarheel Robots Update

The 2012 game, Rebound Rumble, was announced January 7, 2012. The objective of the game is to earn points by shooting balls into basketball hoops at different levels. This year the robot will also have a human player that can control the robot through a Kinect (X Box) system. Students and mentors have brainstormed a design and are in the process of building the robot. Mentors will also be building a simulated practice field. JC Penney sponsored our team again by providing a portion of the registration fee. The team is doing research on fundraisers to help offset the costs of the registration fee, supplies for the robot and supplies for the team.



Kick-Off



Brainstorming and checking kit of parts



Working on programming and starting to build robot

UNC Chapel Hill Rocketeers TARC Team #13446

UNC Chapel Hill NC-MSEN Pre-College Program started a new venture – Team America Rocketry Challenge (TARC) for 7th to 12th grade students. The objective of the 2012 competition is for the students to design and launch a rocket exactly 800 feet in the air with two raw eggs and return the eggs safely to the ground undamaged. The total flight duration should also be between 43 and 47 seconds. The team has met and is in the process of learning the rocket parts and building their own small rocket. They will brainstorm and design the final rocket in February. The team plans to build the rocket before March. The rocket then will be tested before the official qualification launch. The top 100 rockets that have the lowest score will be invited to the “fly-off” event in May.

PERSIST Reunion

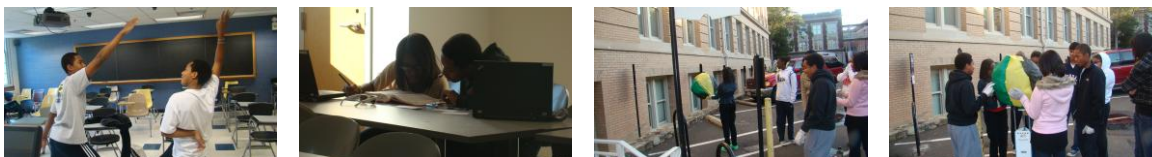
PERSIST students met over the winter break to share their first year college experiences. So far everyone is enjoying college life.



NASA SPACE Updates

- During Saturday Academy Session I, SPACE students researched aspects of the Northern Lights and plan to record their presentation during Session II. They also built electromagnets, performed an experiment on reflection, built and launched a hot air balloon.
- In Session II, students recorded the first draft of their Northern Lights presentation. They will critique and correct their presentation before making the final recording. The final presentation will be loaded onto the SPACE I-CAN website.
- Students made a Rube-Goldberg machine and will also prepare for the UNC Pembroke Olympic Games during Session II.

Session I

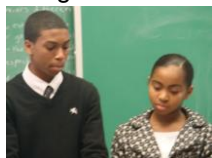


Session II

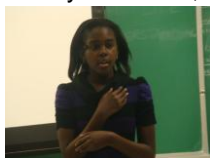


Dr. Martin Luther King, Jr. Birthday Celebration

This year's theme was "The Power of One". Two students served as Master of Ceremonies – Logan White, 6th grade student from Lakewood Academy and Calvin Affleck, 9th grade student from Jordan High School. Students participated in the program by submitting artwork or expressing themselves through dance, song or spoken word. The guest speaker, Hanshi Jessie Bowen, 10th degree black belt gave a karate demonstration. He also shared his 8 principles of success – Accept Self-Responsibility; Master Self-Management; Employ Independence; Gain Self-Awareness; Adopt Life-Long Learning; Develop Emotional Intelligence and Believe in Yourself. He told students and guests to remember your Belief, Desire and Expectancy = Your Faith.



Calvin Affleck & Logan White



Mariah Shobande



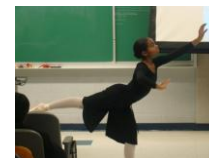
Melyssa Minto



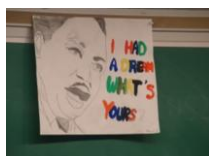
Robert Furgus



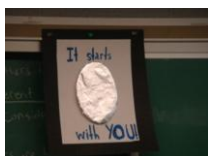
Mariah Shobande & Emmanuel Johnson



Logan White



Mariah Shobande



Artwork by Logan White



Trevon Stoddard



Hanshi Jessie Bowen



Karate Demonstration



**UNC Chapel Hill NC-MSEN
Pre-College Program**

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We're on the Web!

www.unc.edu/depts/ed/pcp

Upcoming Events**Saturday Academy –
Session I**

October 22
November 5
November 19

**FIRST Robotic Interest
Meeting**

October 22

Parent Academy

November 19

FIRST Robotics Kickoff

January 7

**FIRST Robotics Build
Season**

January 7 – April

**Saturday Academy –
Session II**

January 14
January 21
February 4
February 11

Parent Academy

January 21
February 11

**Dr. Martin Luther King, Jr.
Birthday Celebration**

January 14

UNC CH SPACE Teacher wins a Grant

Mr. Willis Foster, UNC Chapel Hill NASA SPACE teacher, received a grant from Biogen Idec Foundation Micro Grants in Science Education Fund to purchase LEGO Robotics Kits for Kestrel Heights School for the project Robotics. The grant will be for \$2,279.92 and will start December 2011. Dr. Rita Fuller helped with the grant and the UNC Chapel Hill NC-MSEN Pre-College Program helped his students get excited in robotics.

Healthy Girls Save the World! Presentation**Promoting Healthy Bodies, Minds, and Relationships"**

Camille (Junior, UNC Chapel Hill) and Rachel McGirt (12th Grade Student, Jordan High School) both former UNC Chapel Hill NC-MSEN Pre-College Program Alumnae have formed an organization, Healthy Girls Save the World (HGSW). HGSW provides the tools and knowledge for young girls to create and sustain a healthy and well-rounded lifestyle. The core of HGSW is to educate girls on the importance of healthy eating habits, regular exercise and chronic obesity related illness prevention. HGSW aspires to serve, build, and develop young girls into powerful women that will save the world!

HGSW will present to the middle school rotation on February 4th.

Outreach

- UNC Chapel Hill NC-MSEN Pre-College Program students will be demonstrating science and mathematics activities at the Green Hope Elementary Science and Math Night on February 2, 2012.
- A possible collaboration with Haw River Elementary School is in discussion.

Book Drive

Students donated gently used and new books to the UNC Pediatric Oncology department during Session I. Approximately 100 books were collected.

