

UNC Chapel Hill NC-MSEN Pre-College Program

University of North Carolina at Chapel Hill, School of Education

Saturday Academy – Session I

January 25, 2011
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Students attended from Durham, Orange, Chapel Hill and Alamance counties. The middle school students rotated between four classes – science, language arts, mathematics and competition preparation. In science they learned more about the brain, genetics, and chemistry of household items. In the mathematics class students performed experiments with density and used the math to discover the formula for density. Students reviewed algebra skills and manipulating equations. The Language arts teacher taught students how to write more effectively, the parts of a newspaper and editing techniques. High school students attended

four classes –science, mathematics, language arts and careers. Microgravity was the focus in the science class.

In the math class, students were grouped by their upcoming math class – Algebra I, Geometry, Algebra II and Pre-Calculus and worked on different projects to use the appropriate math skills.

In the Careers class, students continued to work on their CFNC accounts, learned six steps to decision making and were introduced to the ICAN SPACE community site.

Writing skills was the focus in the Language Arts class. Students were given four STEM related topics and

worked on interviewing each other based on specific criteria.

Special Activities

- Ret. Col. Larry Campbell and UNC Chapel Hill Yolanda B. spoke to high school students about Leadership and OPT ED.
- Ms. Mattie Gaddy, Multicultural Counselor, NCSSM spoke to middle school students and NASA SPACE students about how students are accepted in NCSSM and the requirements.
- Ackland Art Museum – middle school students visited and learned about how culture and how religion was used in different types of art.



MS Science



MS Language Arts



MS Competition Prep



MS Math



HS Career



HS Science



HS Math



HS Language Arts



Mattie Gaddy
NCSSM, Multicultural Counselor



Ackland Art Museum visit



OPT ED Alliance Day

Middle and high school students attended the Ninth Annual Alliance Day. The middle school learned about different STEM careers on the STEM bus, spoke to members of the cart competition, the electromagnetic spectrum and how the gaming system controllers have changed over the

Quentajia Small, presented her SCIBLS research project – Monkey See Monkey Glow



Student in Cart



STEM Bus



MS Class



Quentajia Small presenting her research



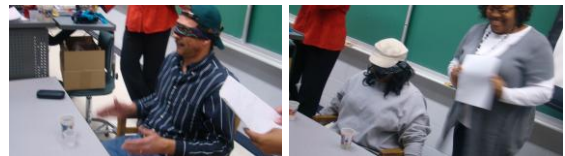
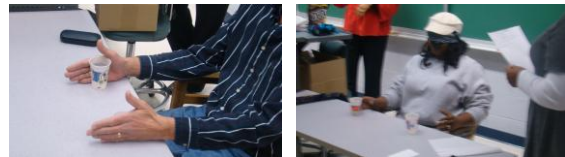
UNC Chapel Hill NC-MSEN Pre-College Program
NC-OPT ED Participants

Parent Academy

The second Parent Academy for the academic year occurred Saturday, December 4th. Parents participated in an opening activity, worked on reorganizing the PIE Club. The parents worked on a STEM activity which was to write down the steps on how to program a robot. They had to write the steps on how to empty a cup of M&M's into an empty cup. The robot would be blindfolded and could only do exactly what the directions said. The parents were successful 'robots.'



Parents in discussion



Parents performing "Robot Activity"

Saturday Academy – Session II

Session II is in progress. The Special Events this session are Dr. Martin Luther King, Jr. Birthday Celebration and CFNC presentation by Ms. Sarita Broadway, Regional CFNC Representative.

Dr. Martin Luther King Jr. Birthday Celebration – *Theme – Your Journey*

The celebration started with a PowerPoint presentation of Dr. Martin Luther King, Jr.'s life and journey from childhood to civil rights leader. The guest speaker was Sam James, Mechanical Engineering Technician in the Aerospace Composite and Models Development Branch at NASA Langley Research Center (LaRC) in Hampton, Virginia. He spoke to students about his journey from childhood to his career. He brought samples of the different materials that that could be used to manufacture planes. He brought a 1% scale Blended Wing Body plane that is presently displayed in our office. He concluded his speech by reminding students the importance of taking challenging classes and to do their best. After the presentation, students were asked to think about their present Journey and how it will affect their future journey.



Sam James describing model of NASA Blended Body Airplane

FIRST Team 3331 Tarheel Robots



The 2011 competition is “Logo-Motion.” The objective of the competition is for the alliance of three teams to place as many “Ubertubes” in the shapes and colors of FIRST logo and place them on a pegged wall in the correct order. At the end of the match a robots can deploy a mini-bot to climb a pole. The first mini-bot to reach the top of the pole earns additional points for the alliance.

JC Penney and Tyco Electronics paid the registration fee. Fundraisers are in process and donations are welcome for the additional materials needed. Mr. Sam James was invited to share his expertise with the students as they brainstormed the design and function of their robot. He was very helpful and continues to make suggestions to the team.

The team has started building the robot. There are twenty students participating and half of those students are new members.



Team in the Brainstorming Phase



Some of the team members and Mentors

NASA S.P.A.C.E.

SPACE students attended Saturday Academy and participated in the high school rotation. The students logged on the ICAN Space website and were encouraged to participate on their own.

The students went to the NASA Langley with the NC State NC-MSEN Pre-College Program SPACE students. After the visit the students went to visit Christopher Newport University in Newport News, VA.



NASA SPACE Students in action

P.E.R.S.I.S.T.

PERSIST students have been working on their post high school plans. The plans as of now are -

- Sandra Mendoza accepted to Highpoint University.
- Janelle Ingram interviewed for the Teaching Fellows Scholarship
- Patrice Goldmon accepted to NC A&T University and UNC Charlotte.
- Jenifer Brown accepted to Massachusetts Institute of Technology, finalist for Morehead-Cain scholarship, semi-finalist for Morehead-Cain Scholarship, and going to China to present her research and represent the USA at the Beijing Youth Science Creation Competition in March.

Upcoming opportunity for PERSIST Students

PCP students have been invited to Cary Creek Elementary school Math and Science Night in February to perform the activities that were demonstrated at the UNC Science Expo. PERSIST students are being asked to lead the Science Night and help in other PCP students that participate. They are currently checking their schedule.



PERSIST Students in Action

Winter and Spring Calendar of Events

Spring Session Saturday Academy

January 15, 2011
February 26, 2011
March 19, 2011
April 9, 2011

Parent Academy

February 26, 2011
April 9, 2011

FIRST Team #3331

January 8 – April 9, 2011

East Coast Science Decathlon

March 26, 2011

State NC-MSEN Day

Hosted by Fayetteville State University
April 30, 2011

