

“Inaugural” Sac and Fox Nation Science Fair February 19, 2011

Cheryl L. McClellan, Second Chief

Why host a science and engineering fair? The objective of using FY2011 RAP funds to host the very first Sac and Fox Nation Science and Engineering Fair (SFNSEF) was to offer students an opportunity, not to just win prizes, but to learn communication and leadership skills. Our youth are our future!! A science and engineering fair is one means to spark the interest of students and instill the desire to learn and continue their education by building on their science projects year after year, and become eligible for prestigious academic and financial awards and recognition to further their education.

Native Americans have always used STEM fields (science, technology, engineering, and math) since the

beginning of time. As scientists, American Indians used “astronomy” and “geology” and “geography” to learn important facts about objects in the sky and used them to tell time, to predict the changes of the seasons, and to use maps. American Indians knew that the world was round long before Europeans ever did, as reflected in the many Native American stories and beliefs. “Biology” and “plant sciences” were well known to Native Americans as indicated by maize or “corn”, a gift to the rest of the world from the Native Americans. Corn is truly a human invention, a species that does not exist naturally in the wild and can only survive if sown and protected by humans. Native Americans were well aware of “chemistry” to be able to use

alkaline substances to remove the hard exterior of corn once it hardened, and to be able to use the alkaline substances to soften the corn and make it edible again. As healers, Native Americans have always known the connection between “medicine” and “behavioral sciences” and “social sciences”, or the spirit as well as the family, community, and environment. Native Americans have always utilized “engineering” and “math” to navigate the waterways and build stable housing structures. Any singer, dancer, seamstress, or bead worker uses “math” on a regular basis!

The Sac and Fox Nation Science and Engineering Fair was open to students in grades 5th – 12th. To be eligible to participate, the student must be an

enrolled member in any Federally Recognized Tribe and live and attend school within the Sac and Fox jurisdiction, OR be an enrolled Sac and Fox member, regardless of residency location.

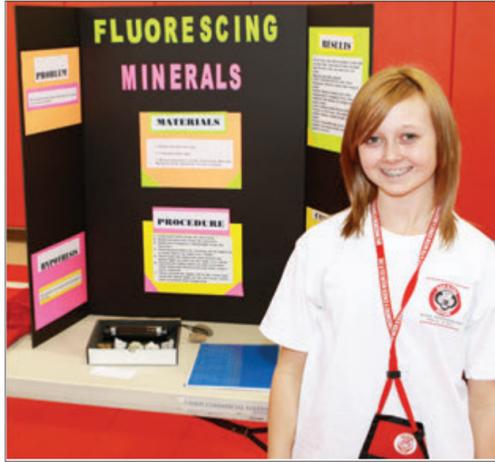
A science fair project asks a question, an hypothesis, and through an experiment, research, or interviews, answers the question (proves or disproves the hypothesis). We had nine (9) projects for our first SFNSEF, a very good turnout.

Ken Johnson, SFN Newspaper Editor, took pictures during the day and created a photo memory, specialized for each participant. Each participant received a science fair medal and photo collage as recognition for their participation.



Lava Lamp

Winonah Hamblin, Shawnee Middle School, 6th grade



Fluorescing Minerals

Kaitlyn Hester, North Rock Creek School 7th grade



Energizer Potato

Tomi Calderon, North Rock Creek School, 8th grade



Candy Land

Sydney Myers, North Rock Creek School, 7th grade



Rule Out The Taste Buds

Sebastian Mason, Sequoyah Elementary School, 5th grade



Monster vs Red Bull

Sheena Murdock, North Rock Creek School, 8th grade



Science of Black Light

Nicholaus Jennings, Grove School, 8th grade



Space Ship

Preston Barse, North Rock Creek School, 5th grade



3-2-1 Lift Off

Whitney Heer, Shawnee High School 12th grade

Special Awards

Special awards are donations by individuals (or organizations) to recognize specific skills and talents of a student, and are selected and awarded by that individual. Special awards are additional to the basic science fair awards and allow individuals and organizations to show appreciation for the work that the students have done in hopes of encouraging further research and learning.

Below is a listing of the Individual/Organization, the “criteria” for winning the Special Award, the award, the winner of the award and the title of their project.

- Banc First** “Critical Thinking: Evaluates evidence and assesses conclusions”
- \$50 Savings Bond: Sebastian Mason “Rule Out The Taste Buds”
- \$50 Savings Bond: Tomi Calderon “Energizer Potato”
- Carman Ketcher** “Creative Idea!”
- \$20 cash: Preston Barse “Space Ship”
- \$20 cash: Nicholaus Jennings “Science of Black Light”
- Cara Cowan Watts** “Best Use of Engineering Principles”
- \$25 VISA card: Preston Barse “Space Ship”
- Edward Hara** “Best Use of Engineering Principles”
- \$50 cash: Whitney Heer “3-2-1 Lift Off”
- Dr. Carol Crouch** “Excellent Effort!!”
- \$50 cash: Preston Barse “Space Ship”
- \$50 cash: Sheena Murdock “Monster vs Red Bull”
- Cheryl McClellan** “Effective Communicator”
- \$25 cash: Sydney Myers “Candy Land”
- \$25 cash: Whitney Heer “3-2-1 Lift Off”
- Paul Bradford** “Good Data, Record Keeping”
- Gift card: Kaitlyn Hester “Fluorescing Minerals”
- Gift card: Tomi Calderon “Energizer Potato”
- Univ of Oklahoma** “Most Outstanding Project in the Geosciences”
- \$50 + an OU t-shirt: Nicholaus Jennings “Science of Black Light”
- SFN Business Committee** “Leadership”
- \$100 gift card: Winonah Hamblin “Lava Lamp”
- \$100 gift card: Whitney Heer “3-2-1 Lift Off”
- Jimmie Carol Tiger** “Applicable to Housing”
- \$20 Lowe’s card: Preston Barse “Space Ship”
- \$20 Lowe’s card: Sheena Murdock “Monster vs Red Bull”

An additional Special Award offered by Taylor Davis, for Tuition/ Books scholarship to attend the Coffeyville Community College, did not have a winner identified.

Student Activities during Judging

While the projects were being judged, the students had to leave the area. During that time they participated in two activities to promote “healthy minds and bodies”. To promote a healthy body, Black Hawk Health Clinic sponsored fitness activities, led by Sharlyn Kennon. To promote a healthy mind, LyndeeJon McClellan coordinated a Bridge Building Contest. Any attendee at the science fair could participate. Teams of two people were each given a kit which included a pair of scissors, 20 straws, 10 coffee stirrers, roll of scotch tape, and 2 feet of string. Each team was given 30 minutes to build a bridge that would span 12 inches. During the Award Ceremony, the bridges were “tested” by adding weights to the bridge. The winner was identified as the bridge that held the most weight for the longest period of time.

The winners of the Bridge Contest were:

- 1st place: Tomi and Anthony Calderon, each winning an iPod touch.
- 2nd place: Preston Barse and Karsten Mathis, each winning \$50 Visa gift card

SFNSEF Grand Award Winners

The judges selected the top six projects as the Grand Award Winners. Each student was then allowed to select their prize.

Student Name	Title of Project	Grade	Prize
Whitney Heer	3-2-1 Lift Off	12	19” Color TV w/ DVD player
Tomi Calderon	Energizer Potato	8	19” Color TV w/ DVD player
Sydney Myers	Candy Land	7	iPOD Nano
Sebastian Mason	Rule Out The Taste Buds	5	Waterproof Camera
Winonah Hamblin	Lava Lamp	6	Waterproof Camera
Nicholaus Jennings	Science of Black Light	8	iPOD Nano

Sac and Fox Nation Science and Engineering Fair will be submitting these six winners to the National American Indian Science & Engineering Fair (NAISEF) in Albuquerque, NM on March 24-26, 2011. Our SFNSEF students will compete with participants from 28 tribes, representing 12 states and a Canadian province. This year, our SFNSEF students are the only team from Oklahoma participating at the National fair!!! Students gain exposure and experience that will be useful to them as they progress through their collegiate and professional careers.

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