

# SCIENCE BOUND News

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## Excellence has its Privileges



### LETTER FROM THE DIRECTOR

I didn't grow up playing soccer, but I've watched quite a bit of soccer since so many of our young people play. I love it when the team is working as a team: they're moving down the field, the forward gets the perfect pass and is headed for the goal. Whether the ball flies through the air or skims across the grass, when the team scores it is celebration time!

I have to admit that now and then I dream of being the one on the field making that goal! Wouldn't that be something?! But there are a few problems with that dream. First, although I'm in pretty good shape I'm not knowledgeable enough about soccer in general to know what to do to score. Second, I haven't practiced the moves and plays so that I can put a team in position to score. So for me, scoring is a dream.

Now for those on the soccer team, scoring is an achievable goal. Why? Because every practice they are putting in the time and focusing their energy to give themselves every opportunity to be in position to make that goal.

Young people, are you dreaming or do you have a goal? Are you just thinking about how nice it would be to be on the bus to Kansas City this summer (dreaming), or are you putting in the time and focusing your energy on your academics so that you can get your ticket (working towards the goal of a 3.75 gpa)?

Keep working – remember that excellence has its privileges. Kansas City, here we come!

Dr. Connie Hargrave  
Director



# NOTHING LESS THAN SUCCESS!

More than 60 students participated in this year's Des Moines "Nothing Less Than Success" 8th Grade Science Fair. Held at Weeks Middle School on January 24, the event provided SCIENCE BOUND participants with the opportunity to use the scientific method on an independent project and present their findings.

"If we are serious about preparing our young people to pursue careers in agriculture, science, technology, engineering and mathematics - ASTEM fields - we have to provide them with opportunities to engage in scientific inquiry," said Dr. Connie Hargrave, SB Director.

The top student projects received the Science Award in recognition of exemplary work. Twenty-three projects were in this category. Those who completed solid projects were recognized with the Participant Award. "It was a very successful event," said Hargrave. But she is also quick to add that the success of the event

depends on a number of partners. "First, it is a credit to the teachers who work with our young people on an ongoing basis to ensure their success," said Hargrave. "It is also critical that we have community support. The more than 20 judges from CenturyLink, Pioneer Hi-Bred, and Iowa State, who came out to judge projects, were invaluable."

"But student success is also a tribute to the parents," Hargrave continued. "Family support is a critical component of every young person's success."

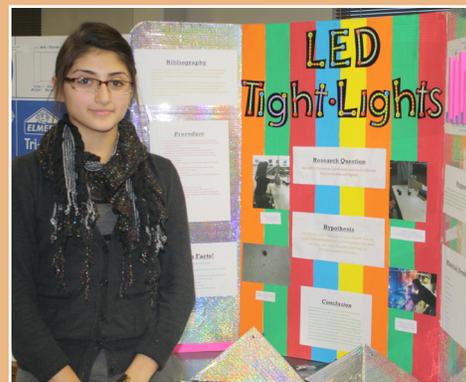
Students who successfully completed the science fair requirement must then complete an exemplary essay to be considered for the high school program.

"We anticipate that all of our young people will continue to meet the program's expectations," said Hargrave. "It is great to see them internalizing the program's motto of 'Nothing Less Than Success.'"



A SB student explains his work to a science fair judge.

## CONGRATS!



**Yvonne San Elias** took home the first place prize in the category of physical science at the Des Moines Public School District's 8th grade science fair. San Elias is a SB student from Moulton Extended Learning Center. Her project was titled "LED vs. Incandescent."

Students who placed first, second, or third in one of the nine different categories earned a medal and advanced to the State of Iowa Science Fair held at Hilton Coliseum in Ames on March 30-31. San Elias placed sixth at State.



More than 20 volunteers from Pioneer Hi-Bred, CenturyLink, and Iowa State judged the science fair projects.

# STUDENTS VISIT CENTRAL CAMPUS

Research indicates that students who challenge themselves with harder courses during high school do better in college. This year SCIENCE BOUND 9th graders visited Central Campus in downtown Des Moines to learn more about the high school coursework available to challenge them academically.

During the visit to Central Campus on January 6, students learned about opportunities for advanced level courses and the International Baccalaureate Programme. Central Campus is a regional academy of the Des Moines Public School District that provides extended and unique learning opportunities to students.

Crista Carlile, supervisor at Central Academy, was excited to share Central Campus opportunities

with SB students. “The kids had an amazing time and asked lots of great questions! All of them were able to get a ‘hands on’ experience in a program of their choice. What great kids!” said Carlile.

One of the unique opportunities is the International Baccalaureate Programme. The IB Diploma Programme provides students with a broad educational curriculum that provides challenging and rigorous courses along with opportunities for language, arts and community service.

Successful IB Diploma students receive college credit based on international exams in conjunction with class work.



*SB students get a first-hand look at the Ag Lab while on a visit to Central Campus in Des Moines.*

Des Moines Public Schools is the first school district in Iowa to offer the International Baccalaureate Diploma, and Central Academy is the only school in the state to offer both IB and Advanced Placement courses for high school students.

## MEET DELISE LOCKETT, AGRICULTURAL ENGINEER



*Delise Lockett is the first SB agricultural engineer.*

**Delise Lockett** is the first SCIENCE BOUND student to graduate from the ISU Agricultural and Biosystems Engineering Department.

Lockett described her involvement with SB as life changing, “Before SB I had not thought about college. SB let me know that I had the potential to be great.”

Lockett graduated from Des Moines East High School and enrolled in agricultural engineering with the agricultural and environmental systems option as a USDA Multicultural Scholar. She graduated in December 2008 with her bachelor’s of science degree. She completed two internships at Monsanto in Soda Springs, Idaho.

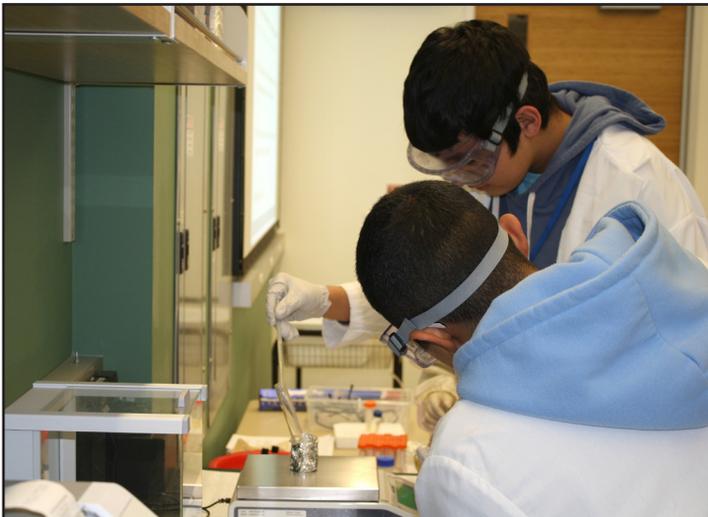
Lockett then joined the research group headed by Dr. Matt Helmers and began work on a Master’s de-

gree in August 2009. She completed her Master’s of Science degree in December 2011.

Lockett added, “SB was like a parent teaching you to walk. They helped me take my first step in my journey beyond ordinary to extraordinary.”



*Lockett and Agriculture and Biosystems Engineering chair, Dr. Steve Michelson.*

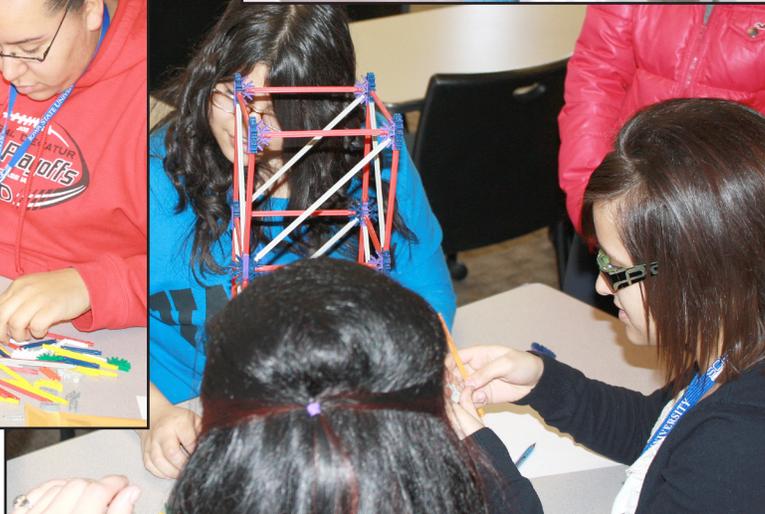
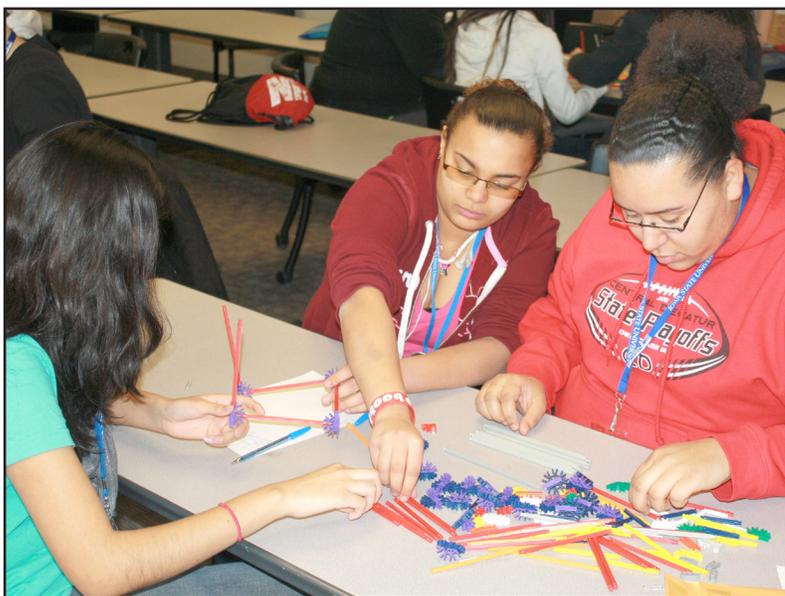


## Science Bound Saturdays

*(Above & Right): SB students had a hands-on experience with biofuels at a February Saturday Iowa State University visit.*

*(Below): Students tested their ability to build structures to withstand earthquakes.*

*Each year more than 60 ISU professors and researchers host SB students in their labs, providing hands-on experiences and expanding students' knowledge of STEM careers.*





## Shadow Day

(Above): Seniors **Kierra Osborn** (East) and **Kate McMahon** (Roosevelt) (third and fourth from left) visit the SB study room with hosts **Walberto Corvera** (second from left, Lincoln, Class of 2011) and **Massah Massaquoi** (far right, Lincoln, Class of 2008). SB seniors and juniors were on the Iowa State University campus during Shadow Day on Friday, February 10. More than 80 students from three Iowa school districts attended the full-day event.



## Coming Home

(Left): **David Mwirichia** (right, Hoover Class of 2011) speaks to the Hoover High Science Bound students about his experiences at Iowa State. All SB graduates return to their high schools to give presentations.

## FTC Robotics Team Places

(Bottom Left): Composed of some of the top SB students from area high schools, in their first year the team *Intentalo*, which means "try it" in Spanish, advanced to state. The team placed 13th among more than 40 teams in their final competition and won a number of awards along the way. The team was launched with funding from the Andersen Corporate Foundation.



### PARTNERING FOR STUDENT SUCCESS



Above: Facing the parents are Ashley Dameron (left), Massah Massaquoi, Claudia Martinez, and Jaime Sandoval.

Did you know that when you ask your young person what homework is due, turn off the television and read during their study time, listen to them explain what is coming up in class, or just ask that age-old question, “What did you learn at school today?” you are empowering your young person succeed in school? (see sidebar)

Research suggests that even though parents may think they have little influence over their teenagers, there are actually a number of things that parents and guardians can do to help their students achieve more in school. One of the goals of SCIENCE BOUND is to partner with parents and guardians for student success. Twice-yearly parent programs are one method SCIENCE BOUND uses to empower parents.

During the Fall 2011 meeting the theme was “Strength Through Partnerships,” and families heard from Principal Matt Smith and counselor Kimber Foshe from North, as well as SCIENCE BOUND teachers Becky Wildman-Swartz from Lincoln and Jennifer Bakevich from

East, about their passion for helping young people succeed and their willingness to partner with parents in that process.

In the spring 2012 meeting parents heard from former SCIENCE

BOUND students who are now undergraduates at Iowa State. Ashley Dameron, Massah Massaquoi, Claudia Martinez and Jaime Sandoval shared their experiences and explained how their parents helped them achieve their goals.



Above: ISU undergraduates/SB graduates speak with the parents during a panel discussion on how to encourage students to succeed in high school. The meeting was held in March at North High School in Des Moines.

### Parent Connection

Parents want their children to do well in high school but sometimes it is a challenge to figure out how to support them. Here are some tips on how to help your teen get the most out of high school.

Help your child show up at school with a good attitude and ready to learn

- Keep tabs on school attendance.
- Make sure your teen gets plenty of sleep.
- Don't accept the “I'm never gonna use this” excuse for not working hard in a particular class.

Help organize time and materials

- Help your teen keep an assignment calendar and divide long-term assignments into small tasks.
- Make sure there is a place for quiet study.

Take an interest

- Listen to your teen talk about what is happening in class.
- Encourage your teen to join a club or sport at school.
- Try to find a teacher with whom you can communicate regularly for updates on your teen's well-being in high school.

Information provided by the National Education Association



## SMART GOALS = SUCCESS

“To achieve ‘Nothing Less Than Success’ our young people need a plan,” said David Romero, student programs coordinator for SCIENCE BOUND.

“Many people make choices without thinking of the consequences,” adds Romero. “We all have a choice, and if we set goals, we are more likely to get where we want to be since we get the opportunity to plan the consequences.” To help students in the goal-setting process, he encourages students to set both short-term and long-term goals using the S.M.A.R.T. goals method.

S.M.A.R.T. goal setting is introduced at the beginning of the 8th grade year during the Springbrook Retreat. S.M.A.R.T. goals are:

**Specific.** Answer who, what, where, when, which, and why when defining your goal.

**Measurable.** It often helps to break down a big goal into smaller goals. To make a goal measurable ask yourself how much, how many, and how will I know when it is accomplished?

**Attainable.** When you list your goals you build your self-image. You see yourself as worthy of these goals, and develop the traits and personality that allow you to achieve them.

**Realistic.** If you have never accomplished anything similar in the past, ask yourself what needs to happen to accomplish this goal?

**Timely.** A goal should be grounded within a time frame. Without a time frame tied to the goal there’s no sense of urgency.

“Goals should be reviewed regularly, at least weekly,” Romero said.



Deb Victor of McCombs Middle School leads students in a S.M.A.R.T. goal-setting session during the Springbrook Earth Sciences and Leadership Retreat.



Students learn about and set S.M.A.R.T. goals during the Springbrook Overnight.

**SCIENCE BOUND**

**IOWA STATE UNIVERSITY**

*SCIENCE BOUND is Iowa State University's premier pre-college educational program to increase the number of ethnically diverse lowans who earn degrees in agriculture, science, technology, engineering and mathematics. SCIENCE BOUND works with middle and high schools in Des Moines, Denison and Marshalltown, Iowa.*

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## New Partnership, Continuing Impact

### SB Receives \$25,000 from CenturyLink

In November during SCIENCE BOUND's "Countdown to College" workshop for high school seniors and their parents at North High School in Des Moines CenturyLink made a generous gift of \$25,000 to SB to support academic development and career aspirations of students in the program.

"The Science Bound program fits perfectly with CenturyLink's vision to improve lives, strengthen businesses and connect communities. CenturyLink is proud to support the dedicated students in this great program," said Tim White, CenturyLink general manager and vice president of Iowa.

Gifts like the one from CenturyLink ensure that students completing all requirements of the SB program earn a 4-year tuition scholarship to Iowa State University to study in a science-related field. SB has offered over 250 college scholarships to program graduates.

This gift from CenturyLink means that we are able to continue to impact the lives of students in Iowa, improve Iowa communities, and fill our nation's need for more scientists and engineers" said Connie Hargrave, SB Director.



Students and SB Director Connie Hargrave receive the \$25,000 donation from CenturyLink General Manager Tim White and other CenturyLink personnel.