Teens engineer their future at MU camp

For the more than 80 teens who came to Columbia this month for the University of Missouri’s engineering camp, the lectures, experiments and time spent checking out campus hangouts offered a glimpse of what they might experience soon as college students.

The camp, which was divided into two six-day sessions in July, included 33 high school students from across the state who attended free of charge as “diversity scholars.” In past years, the diversity scholars attended a separate camp called Minority Introduction to Technology and Engineering. More recently, though, the College of Engineering decided to merge the camps so all students could learn the ins and outs of engineering together.

“Diversity in general is very important, and it is so important in the engineering field,” said Tina Balser, recruitment coordinator for the College of Engineering. “It brings people with all skill sets and talents together, and you work as a team to accomplish a goal.”

About 80 students applied to be diversity scholars this year, Balser said.

During the camp, high school students in grades 10 to 12 heard lectures from professors in various areas of engineering, including biological, chemical and mechanical. After the lecture, they participated in hands-on activities with real-world applications. For example, a chemical engineering experiment asked students to test combinations of tools, such as pebbles, nets and sand, to see which would best filter water.

The students who attended already had expressed aspirations to go into engineering, and the camp gave them a chance to narrow their focus.

“I really wish I would have come to something like this before I got to college,” said Kyle Road, a biological engineering graduate student helping out with the camp.

Michelle Boehm, a recent graduate of the civil engineering program, agreed. “When I heard some of the presentations from the different departments, I thought, ‘If I had known that, I would have gone into that,’ ” she said.

For Arien Ragsdale, a 17-year-old from Kansas City, the camp offered him the insight to decide what he wants to do with his future. Before camp, Arien said, he wanted to study information technology engineering and work on animation and digital effects for films. After learning about different areas of engineering, he’s leaning more toward biological engineering.
For other students, such as Elise Biayi, a 15-year-old from St. Louis, the camp reinforced existing dreams. Elise said she already knew she wanted to major in biomedical engineering as an undergraduate student and then go on to medical school. After learning more about the field at camp, she was even more excited for the future.

“We got to learn about biomedical engineering yesterday, and we messed around with pigs’ hearts, and I just loved it. It was so cool,” she said Thursday. “But it’s about helping people in the end and making sure people are healthy.”

The camp wrapped up Friday afternoon with a parents’ open house and an award presentation. Students were divided into teams of five to work on a bridge project throughout the week, and members of the winning team each received a $500 scholarship.

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COLUMBIA MISSOURIAN

Counterfeit, imitation, altered coins on display at University of Missouri museum

By Don Baik
July 25, 2011 | 5:45 p.m. CDT

COLUMBIA — For as long as there have been coins, there have been fake coins — and that's the point of an exhibition through Sunday at the MU Museum of Art and Archeology.

"They have been in the world for thousands of years," said Kenyon Reed, the collections specialist who assembled "CIA: Counterfeits, Imitations and Alterations of Ancient Coins."

"There were always people who ... tried to make counterfeits to cheat consumers and take advantage of their government," Reed said.

As the name suggests, the exhibition has three sections. The counterfeit section contains fourees, or ancient counterfeit coins.

"Fourees tend to have a coppery core," Reed said. "It looks like a good silver coin, but when it passes through hand after hand after hand, the silver coating wears off."

Coins were imitated largely to make them accepted from country to country in ancient times. The Byzantine coin was often imitated. Reed said the Sassanians (from what is now Iran) minted coins based on Byzantine standards for use when they occupied Syria, Palestine and Egypt.

Alterations to coins are simply those made after the coin was minted. A punch mark is a tiny mark mostly found on Roman silver coins, and bankers or moneychangers applied the mark to determine whether the coins were real.
Another type of alteration was cutting a coin in half. That was done to increase the number of pieces of currency available.

Overstrikes were used to recycle coins.

"When a coin passed through hand after hand, they finally became so worn that the government put a brand-new design on the original coin," Reed said. "The overstrike sometimes happened several times on a coin."

Most coins in the exhibition came from individual donors, but some were bought by the museum.

"When they (museum employees) bought them almost 50 years ago, they didn’t realize they were 20th century counterfeits," Reed said. "They were deceived."

Reed hopes to have the content of the exhibition posted to the museum's website by the end of the year.
Japanese beetles threaten corn, soybeans

BY GEORGINA GUSTIN | ggustin@post-dispatch.com | Posted: Tuesday, July 26, 2011, 12:05 am

As far as horticultural pests go, the Japanese beetle is actually kind of attractive, with its iridescent bronze wings and emerald green head lending it an almost jewel-like quality.

But any gardener or fruit grower in the eastern half of the U.S. will tell you that the pretty little scarab is, in fact, a destructive heartbreaker that chows through rose bushes and tomato plants — leaving stripped, skeletal foliage in its wake.

And recently, it has been striking parts of Missouri and Illinois with full force.

"There's quite a concern about the number and just how prevalent they've been," said Julia Pryor, a program coordinator with the University of Illinois Extension. "I'm seeing a lot of people coming into our offices with jars, literally full of these little critters."

Until the last decade or so, the beetle has been an urban problem, troubling gardeners east of the Mississippi. But over the past several years, the bug has started venturing west, striking Illinois and Missouri gardens, mostly attacking ornamental plants and causing little economic damage. Recently, though, farmers in both states say the bugs are moving into their corn and soybean fields, threatening the states' blockbuster commodity crops.

"They're moving in fast," said Braden Thomas, who farms in Tazewell County, Ill., in the center of the state. "This is the first time they've really been a problem to have to actually worry about."

The beetles eat the corn silks, which prevents pollination and the development of the corn kernel, so farmers in areas around both states are spending $20 an acre to have their fields sprayed with chemicals by airplane.

"They usually hit the horticultural crops first," said Wayne Bailey, a professor of plant sciences at the University of Missouri. "But I've been getting calls from around the state about corn and soybeans."

The beetle came to the U.S., plant scientists believe, in a shipment of ornamental irises to New Jersey about 1916. The bugs then spread through suburbia, thriving in abundant lawns where they like to lay their eggs, later surfacing as grubs.

"It used to be confined to metropolitan areas," explained Matt Montgomery, of the University of Illinois Extension. "But as producers have changed their practices, we've created an environment that allows
the grubs to survive, so we've seen this slow westward movement. In our area we're seeing the crest of a wave. ... Some rougher years with this pest are coming."

The St. Louis area, with its many gardens and sweeps of lawn, has suffered the beetle for at least 10 years. But nursery owners say they hope the worst of the beetle's ravages are over.

"Three years ago, they were terrible for me," said Ellen Baredo, horticultural manager at Bowood Farm, in the city's Central West End. "But this year at the nursery, there have been very few."

In rural areas and in crop fields, though, the numbers seem to be climbing and are likely to peak later this month. (The beetles' "high season" in the Midwest is about mid-June to mid-July, when the adults emerge.) Bailey said their numbers would continue to build for the next five or seven years until predators and pathogens brought their population into balance.

The beetles eat anything, including some 400 crop species, but are especially drawn to plants that are sweet or fragrant. For grape growers in Missouri, they have become a persistent problem.

"Their populations have really built up, and in the last couple years they've been worse," said Katie Kammler, of the University of Missouri Extension. "But people are just spraying now. They've gotten used to them."
How Cuts Will Change the Black Middle Class

What will the shrinking of the public sector mean for the economic prospects of African-Americans?

Consumers as Well as Employees

July 25, 2011

Mary Pattillo is the Harold Washington Professor of Sociology and African-American Studies at Northwestern University. She is the author of "Black Picket Fences: Privilege and Peril Among the Black Middle Class."

That African-Americans benefit from public sector employment is well-established. Hence, shrinking the public sector will no doubt shrink the black middle class as well.

Yet this is only part of the story. Not only are middle-class blacks more likely to be public sector employees, but they are also disproportionate consumers of public sector goods, enjoying the fruits of their tax dollar investments.

Middle-class blacks are disproportionate consumers of public sector goods like education. What happens when those goods are cut?

According to census data, black children are more likely than white children to be enrolled in public schools, and the gap is largest between white and black families making $25,000 to $35,000 a year. When state and local education budgets are slashed, and teachers are laid off, the children of lower-middle-class black families, whose prospects define the future of the black middle class, are disproportionately hurt.

This story is repeated across the various services that public sector workers provide. In health care, blacks are more likely than whites to use public hospitals, no matter their income. In public safety, higher-earning blacks have victimization rates comparable to lower-income whites. Cuts to public budgets will mean fewer police, and, more important, fewer jobs programs; that is, fewer alternatives to crime. These cuts will sting more acutely for middle-class blacks.

The final domino falls within African-American families. My research with Prof. Colleen Heflin of the University of Missouri shows that middle-class blacks are more than three times as likely as middle-class whites to have a poor sibling. Public sector job loss and the resulting drop in public sector services means that already fragile middle-class families will be less able to lend a helping hand just as the needs of their extended family members rise.
There is no doubt that cutting the public sector will disproportionately hurt black workers, many of whom earn a middle-class living. But we haven’t yet begun to imagine the treacherous slippery slope as the goods that public sector workers provide begin to disappear, and families already battling to stay in the middle class slowly slide into poverty. Our priority should be how to keep the black middle class from becoming the collateral damage of this “war on big government,” since, as we all know, for collateral damage, there is no recovery.