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Architecture project put to the test

When sophomores in the School of Architecture's studio program recently built a class project, they had some tough customers — 115 children at the South Side Day Nursery who were ready to play. Their job was to build two play structures tough enough to withstand the heavy use of rambunctious children.

The purpose of the project was to give the 11 fledgling architects experience working for a client and designing and building useful objects. They interviewed the nursery school teachers about their needs, visited South Side to see the space, researched what the children like to play on, and then tried to estimate costs and stay within a budget.

The project, which took just two-and-a-half weeks from initial interview to finished product, was assigned by Gay Lorberbaum, associate architect and architecture professor. Each year Lorberbaum searches for a community group needing a structure that architecture students could build. One year, for example, a group of Lorberbaum's students built a sensory playground and a ball pit for the Delta Gamma Foundation for Visually Impaired Children.

This year, the students worked with South Side, located at 2910 Iowa, just west of the Anheuser-Busch brewery. The nursery was founded 101 years ago to provide quality day care to those who couldn't afford it. The purpose still holds true today. A sliding-door scale helps handle overcrowded member families, whose annual salaries average $13,000.

This was the first time many of the students had put hammer to nail. Many of the other courses in sophomore studio (students rotate through several new courses, such as 2-D drawing and lighting) are more theoretical.

The South Side project also required students to collaborate. First, each student constructed a scale model. The South Side teachers wanted a sturdy structure that could be used as both a single unit in the building's central courtyard and as two smaller units that could be separated and placed in different rooms.

Then they met to develop a single plan. The students discovered that the most difficult part of the project was finding a consensus.

"It was especially hard because we tried to incorporate something from everyone's original idea," says Sarah Johnson, one of the students in the class.

Once the design was agreed upon, the students had only 10 days to build it. Each student devoted more than 40 hours to the project, in addition to regular classes. Many were hammering and sawing in Givens Hall until 1 or 2 a.m. some days.

"It will take me the rest of the semester to catch up with my classes," said Carl Stedler. "But seeing the kids playing on our playhouses makes it all worthwhile."

Lorberbaum was full of praise for her charges.

"I've been here 15 years and this is a very exceptional group of students," says Lorberbaum. "They worked way beyond the standard requirements of this studio. And they came in six dollars under budget," she added, beaming.

Judgeing by the squeals and smiles of the four schoolchildren brought to "test" the final product, their new toy was a hit. Complete with a bright green ladder and a blue slide, the jungle gym section was designed for the older children, while the ball pit, with mirrors, carpets and hiding spaces, was designed with toddlers in mind.

Children at the South Side Day Nursery explore their new play structure, which was designed and built by architecture students at the University. The students, dressed in baseball caps, cutoffs and overalls, were pleased with the result.

The University students, dressed in baseball caps, cutoffs and overalls, stood near by as the children from South Side scrambled on their masterpiece. No one seemed ready to leave so we can play in the park. -- Debby Arson

Visitor, short-term parking meters installed

In an effort to enhance visitor and short-term parking options, approximately 60 new parking meters will be installed on the Washington University Hilltop Campus. The plan to install the meters was reviewed this fall by the University's Transportation Advisory Committee.

About a fourth of the 60 meters are 30-minute meters and will replace the 90-minute parking zones on campus. The remaining meters are for two-hour time periods. The meters will be placed in the following parking areas: north and south sides of Brookens Hall, southwest corner of the lot near the Plant Growth Facility and Rebstock Hall; South 40, southeast section of the Athletic Complex lot, near John E. Simon Hall and the Mudd Hall; Building immediately behind the Women's Building; Millbrook Apartments; and a small area near the Post Office, which is located behind Lowderman Hall.

The additional meters are scheduled to be installed during the Christmas holiday break. Once they are in place, approximately 150 meters will be available on campus. The existing meters are located on the two large lots below Brookens Hall, in front of Mannlckrodt Center and at the Athletic Complex.

Gary Sparks, director of the Transportation Department, said that the new meter locations were selected to provide a balance between the need for additional short-term parking and the desire to maintain adequate spaces for individuals with parking permits.

The placement of parking meters throughout the campus has proven to be an extremely effective way of providing short-term and visitor parking. The combination of short-term meters and the availability of daily and weekly parking permits will make parking more accessible to everyone," Sparks said.

Many departments routinely

Algae discovery helps uncover prairie mysteries

Scientists are exploring the secrets of a recently discovered ecological frontier — the Midwestern prairie. The University of Missouri is participating in a program that early settlers on horseback got lost in the 10-foot-tall grasses, native prairie today amounts to just 1 percent of what it was before 1848. In that year, John Deere invented the steel plow, inaugurating the great rush to domesticate the land. Most of the remaining prairie now grows around railroad tracks and "pioneer" cemeteries — the rare areas spared the plows and axes of development in the 19th and 20th centuries.

But ecologists over the past 20 years have found that prairie plants' natural resource was anonymously slipping away, began refurbishing prairie research areas throughout the Corn Belt with varieties of some 500 plant species that once carpeted the area. Also, they have begun to take a closer look at the entire ecosystem — the plants, animals, insects and microbes — the prairiegers.

"This could be a front-line defense to detect even the subtlest of environmental changes, especially regarding pollutants and toxic wastes."

— Wayne Nichols

Now Wayne Nichols, Ph.D., professor of biology at Washington University, has discovered a species of algae, Sphaerellocystis splendenspora, in a southwestern Missouri restored prairie that does something no other known species of algae can do: remove iron from the soil. The scientist, exploring the South Side Prairie near Springfield, has isolated more than 500 different species of algae, including S. splendenspora, in Missouri. Nearly all of these species are as yet to be identified and are of great interest to science. Using the latest techniques in biochemistry and a computer program to set up data tables for quick classification, Nichols has begun an ambitious project. He is developing the most complete catalog ever assembled on the prairie's most basic life form. "Algae and their role in the soil process are for some reason more complete than anyone has ever thought," says Nichols. "We've discovered they can act as a buffer between pollutants from the soil and can select from groups of elements. This species we have found can remove iron from the soil, can even remove iron in laboratory cultures and colonies as a survival mechanism in the prairie soil. We are working on the most important combinations of algae in undisturbed prairie soil."

The ultimate goal is to develop a biological profile of prairie algae that may serve as a barometer of change in the prairie environment itself and the landscape in general. This could be a front-line defense to detect even the subtlest of environmental changes, especially regarding pollutants and toxic wastes.

There is no telling what else may be found in these rich environments, or what potential applications await their use.

Iron is an essential nutrient for...
The Theatreworks/USA productions of fresh life into children's classics, "Rabbit," "Robinson," and "The Velveteen Bunny." These productions honor in theatre for young audiences. The Theatreworks/USA, a touring company, offers "The Edison Theatre" as part of the "ova-series" for young people series. "Columbus!" is presented by the University. Box 1070, One Brookings Drive, except school holidays, monthly during June, July, and August, by the Office of Public Affairs, Washington University, Box 8065; Medical School Campus Box 8005, C72245JW at WUVMC; Photographers: Joe Angeles, Tom Heine, Bono, Gerry Everding, Tony Fitzpatrick, Nancy Gallo, Jim Kevelly, Jill Lammers, and Nancy Maps. Executive Editor: Susan Killenberg, 935-3714, Campus Box 8005, C72245JW at WUVMC. Editor: Deborah Ford, 935-5255. Assistant editors: Carolyn Holford, 935-5283, Campus Box 8005, C72245JW at WUVMC. Assistant editor: Carolyn Holford, 935-5283, Campus Box 8005, C72245JW at WUVMC. Editor, Medical Record: Jon Wiesenthal, 935-5257, Medical School Campus Box 8005, C72245JW at WUVMC. Contributions: Writers: Dolby Antonio, Joyce Zong, Gary Foreman, Tony Fitzpatrick, Nancy Gallo, Jim Kevelly, Jill Lammers, and Nancy Maps. Photographers: Joe Angeles, Tom Heine, Bono, Gerry Everding, Tony Fitzpatrick, Nancy Gallo, Jim Kevelly, Jill Lammers, and Nancy Maps. Address changes and corrections: Postmaster and non-employees: Send to: Office, Washington University, Box 1091, One Brookings Drive, St. Louis, Mo. 63108. Hilltop Campus employees: Send to: Human Resources Office, Washington University, Box 1184, One Brookings Drive, St. Louis, Mo. 63108. Medical Campus employees: Send to: Payroll Office, Washington University, Box 8107, 660 S. Euclid, St. Louis, Mo. 63110.

Kemper Foundation sets up grants to improve learning

The William T. Kemper Foundation, a Commerce Bank Trustee, has presented Washington University with a $50,000 grant to establish the Kemper Faculty Grants to Improve Learning, according to Chancellor William H. Danforth. Michael D. Fields, executive director of the foundation, said the grant is being awarded to the University to be administered by its newly established Teaching Center under the leadership of Robert H. McDowell, Ph.D., professor of mathematics.

"This grant is made because of the foundation's interest in excellent teaching. I am confident that Washington University's focus on teaching and effective learning will augment the educational experience for students," said Fields. Danforth expressed appreciation for the Kemper Foundation's dedication to teaching. "We are grateful for this support of our central teaching mission," he said.

The Kemper Grants to Improve Learning will recognize creative work on new courses or programs, similar to the current Kemper Faculty Grants in the arts. The Kemper Faculty Grant will be offered through the Graduate School, a Panel on Teaching Awards, comprised of outstanding full-time teaching faculty, and their appropriate administrators, will solicit proposals from faculty or departments and make awards to the most promising. The Kemper Awards might allow for some released time, summer support, experimentation, materials, etc., depending on the proposal. The sole criterion for an award is judgment that the effort will result in a significant new learning experience for undergraduates — one that will continue to be supported by the University in the years ahead.

Established in 1989, the William T. Kemper Foundation is dedicated to the late Mr. Kemper's lifelong interest in improving the educational experience, with emphasis on education, health and human services, civic improvements and the arts.

Algae discovery continues from p. 1

"Columbus!" a musical celebration of the man and his adventures, will be presented at 2 p.m. Jan. 19 in Edison Theatre as part of the "ova-series" for young people program. The show chronicles Columbus' greatest discovery and brings to life the late-15th-century man, too overwhelmed by his failures and as a 40-year-old adventurer, and as a 40-year-old scientist. Scientists experiment to improve learning, according to Danforth. The Kemper Faculty Grants are being offered through the Graduate School. A Panel on Teaching Awards, comprised of outstanding full-time teaching faculty, and their appropriate administrators, will solicit proposals from faculty or departments and make awards to the most promising. The Kemper Awards might allow for some released time, summer support, experimentation, materials, etc., depending on the proposal. The sole criterion for an award is judgment that the effort will result in a significant new learning experience for undergraduates — one that will continue to be supported by the University in the years ahead.

Established in 1989, the William T. Kemper Foundation is dedicated to the late Mr. Kemper's lifelong interest in improving the educational experience, with emphasis on education, health and human services, civic improvements and the arts.

George William and Irene Koechig Freiberg Professor of Biology and chair of the department has genetically engineered strains of Salmonella bacteria that he has used as live vaccines and as agents for killing other diseases. By deleting disease-causing genes in the bacteria, Gamella can deliver a vaccine to test animals that provokes an immune response in the animals but does not cause illness. Scientists hold cautious hopes for algae. In fact, some researchers have proposed that oceanic algae blooms, encouraged through fertilization, could help ease the effects of global warming by their elimination of carbon dioxide in photosynthesis — they would use the carbon to create carbohydrates and release the oxygen. The notion is not without its critics, however. Prairies draw to their environments a rich array of life from algae to insects, birds, and other animals that live nowhere else. The prairie chicken, a member of the grouse family, is one of the better known inhabitants of the prairie. Long struggling to survive in the face of encroaching development and other diseases. By deleting disease-causing genes in the bacteria, Gamella can deliver a vaccine to test animals that provokes an immune response in the animals but does not cause illness. Scientists hold cautious hopes for algae. In fact, some researchers have proposed that oceanic algae blooms, encouraged through fertilization, could help ease the effects of global warming by their elimination of carbon dioxide in photosynthesis — they would use the carbon to create carbohydrates and release the oxygen. The notion is not without its critics, however. Prairies draw to their environments a rich array of life from algae to insects, birds, and other animals that live nowhere else. The prairie chicken, a member of the grouse family, is one of the better known inhabitants of the prairie. Long struggling to survive in the face of encroaching development and other diseases. By deleting disease-causing genes in the bacteria, Gamella can deliver a vaccine to test animals that provokes an immune response in the animals but does not cause illness. Scientists hold cautious hopes for algae. In fact, some researchers have proposed that oceanic algae blooms, encouraged through fertilization, could help ease the effects of global warming by their elimination of carbon dioxide in photosynthesis — they would use the carbon to create carbohydrates and release the oxygen. The notion is not without its critics, however. Prairies draw to their environments a rich array of life from algae to insects, birds, and other animals that live nowhere else. The prairie chicken, a member of the grouse family, is one of the better known inhabitants of the prairie. Long struggling to survive in the face of encroaching development and other diseases. By deleting disease-causing genes in the bacteria, Gamella can deliver a vaccine to test animals that provokes an immune response in the animals but does not cause illness. Scientists hold cautious hopes for algae. In fact, some researchers have proposed that oceanic algae blooms, encouraged through fertilization, could help ease the effects of global warming by their elimination of carbon dioxide in photosynthesis — they would use the carbon to create carbohydrates and release the oxygen. The notion is not without its critics, however. Prairies draw to their environments a rich array of life from algae to insects, birds, and other animals that live nowhere else.
Louis V. Avioli, M.D., Syracuse University, has recently been named to a committee or elected an officer of a professional association.
**CALENDAR**

**Thursday, Dec. 12**
- 4 p.m. Dept. of Hematology and Oncology Presents: **David Verworn**, WU assoc. prof., of pediatrics and of cell biology.
- 4 p.m. Dept. of Immunology Seminar: **Kathy Parker-Prantar**, WU Dept. of Medical Genetics.
- 4:15 p.m. Dept. of Neurology Seminar: **Wolfgang Hennig**, Dept. of Genetics.

**Friday, Dec. 13**
- 8 a.m. Dept. of Obstetrics and Gynecology Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 9:15 a.m. Pediatric Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 1 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.
- 4 p.m. Dept. of Gender Studies Seminar: **Marilyn Chill**, chief resident.

**Saturday, Dec. 14**
- 9 a.m. Saturday Morning Neuro Science Seminar: **David Perlmutter**, WU assoc. prof., of pediatrics and of cell biology.
- 4 p.m. Dept. of Neuroscience Seminar: **Beverly Wright**, WU assoc. prof., of pediatrics and of cell biology.

**Monday, Dec. 16**
- 9 a.m. Saturday Morning Research Discussion for Students: **Donald Finkel**.
- 10 a.m. Friday, Jan. 3: Dept. of Genetics Seminar: **Donald Finkel**.
- 5 p.m. Divisional Research Discussion for Students: **Donald Finkel**.

**Wednesday, Jan. 15**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 4 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.

**Friday, Jan. 17**
- 8 p.m. Edson Theatre **"Stag Leap" Series Presents an "All American Program" with Chinese astrophysicist Fang Lizhi**.
- 8 p.m. Dept. of Music Faculty Vocal Recital: **Zhou Xuan**.

**Saturday, Jan. 18**
- 8 p.m. Men's Basketball: **Missouri-Rolla (men only); WU vs. William Jewell**.
- 8 p.m. Men's Basketball: **WU vs. DePauw U.**
- 8 p.m. Men's Basketball: **WU vs. U. of Northern Colorado**.

**Sunday, Jan. 19**
- 8 p.m. Men's Basketball: **WU vs. Principia College**.

**Monday, Jan. 20**
- 8 p.m. Men's Basketball: **WU vs. Iowa State**.

**Wednesday, Jan. 22**
- 8 p.m. Men's Basketball: **WU vs. Drake**.

**Friday, Jan. 24**
- 8 p.m. Men's Basketball: **WU vs. Missouri-St. Louis**.

**Saturday, Jan. 25**
- 8 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 10 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**

**Monday, Jan. 27**
- 8 p.m. Men's Basketball: **WU vs. Indiana University**.

**Wednesday, Jan. 29**
- 8 a.m. Dept. of Obstetrics and Gynecology Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 4 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.

**Friday, Jan. 31**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Saturday, Feb. 1**
- 8 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 10 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**

**Monday, Feb. 3**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Wednesday, Feb. 5**
- 8 a.m. Dept. of Obstetrics and Gynecology Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 4 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.

**Friday, Feb. 7**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Saturday, Feb. 8**
- 8 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 10 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**

**Monday, Feb. 10**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Wednesday, Feb. 12**
- 8 a.m. Dept. of Obstetrics and Gynecology Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 4 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.

**Friday, Feb. 14**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Saturday, Feb. 15**
- 8 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 10 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**

**Monday, Feb. 17**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Wednesday, Feb. 19**
- 8 a.m. Dept. of Obstetrics and Gynecology Grand Rounds: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 11 a.m. Assembly Series Presents: **Robert F. Kennedy Jr.**
- 4 p.m. Dept. of Obstetrics and Gynecology Seminar: **Marilyn Chill**, chief resident.

**Friday, Feb. 21**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.

**Saturday, Feb. 22**
- 8 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**
- 10 a.m. Noon University College Orientation and Information Workshop: **Chinese astrophysicist Fang Lizhi will open spring Assembly Series**

**Monday, Feb. 24**
- 8 p.m. Men's Basketball: **WU vs. Creighton**.