

Camden Students Prepare Experiment For Shuttle

CAMDEN, N.J. — A group of high school students here is ready to make the jump from the classroom to outer space in their project to place an experiment aboard the space shuttle.

In early October, students representing the city's two high schools — Camden and Woodrow Wilson — presented a panel of engineers from RCA Corporation with their final plans for the experiment. It calls for a colony of carpenter ants to be placed in a sealed container while cameras record the effect of weightlessness on them.

Students and the RCA engineers agreed to some design changes and the need for further information, but overall the engineers praised student efforts.

If students can meet their self-imposed timetable for carrying out the experiment's construction, it will be ready by mid-February, the deadline for a possi-

ble May voyage of the shuttle.

Known as Orbit 81, the project is a cooperative effort between the high schools. It started in 1978 as part of an on-going RCA objective to interest minority students in engineering careers.

The students chose an ant colony as the subject of their experiment because the insects have hard external skeletons to withstand the rigors of launch, and a social structure that might be affected by weightlessness.

Since the program started, RCA, which has several engineering facilities in the southern New Jersey area, has provided engineering instruction and guidance, and has donated electronic equipment for classroom use.

The company also has made a down payment (\$500) and a progress payment (\$1000) on the \$10,000 fee NASA charges to reserve cargo

space for small experiments aboard the shuttle.

The students plan to take still pictures and movies of the ant colony while it experiences the weightlessness of space for two weeks. The data may prove useful to future human space colonists.

To control the temperature within the canister and operate cameras and their lighting, the students have programmed a microprocessor chip, just one of the skills taught as part of the program.

RCA engineers have instructed students on computers, computer software, amateur radio satellite terminals, and electronic test equipment. Chemists from DuPont and Thiokol lectured and made presentations on rocket motors and propulsion materials.

Professor John Tarka of Temple University advised students on biological studies. Some colleges and universities in the area have offered scholarships to outstanding students in the program.

At times Orbit 81 has involved much of the student bodies of both high schools. Business students, for example, controlled the project's finances. Other students set up a library. Industrial arts students designed drawings and fabrications, while art students promoted the project with posters. When the administrator of NASA visited the school, home economic students prepared a special "space meal."

Teachers of both schools developed supplemental classwork and summer enrichment courses for students in the program.

According to Fred Reiss, supervisor of the science department at Camden High, Orbit 81 had several spinoffs. Enrollment in chemistry classes, for example, has risen forty per cent and additional physics classes have had to be added since the project began.

"When we started our computer group, we had one advisor. We're now on our third," Reiss said. "In short, the project has given us the opportunity to venture into the corporate and real world, while learning and growing under the protective umbrella of an educational body."

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Students from Camden's two high schools (Woodrow Wilson and Camden) study a colony of carpenter ants as part of Orbit 81, a project to put the ants into space aboard the shuttle Columbia.

Duke Students Enjoy Flexibility And Lack Of Red Tape

Their ages span the early 20s to the late 40s and their occupations range from physician to field hockey coach.

In the last few months, they've had one thing in common: They've been students during the first semester of Duke University's new part-time graduate studies program.

Some of them are beginning work on advanced degrees while others are exploring possible areas of study.

Thirty-three students, almost half of them women, enrolled in the Graduate School special program through the Office of Continuing Education, according to Director Jean O'Barr.

Designed for maximum flexibility, the part-time program allows working persons to keep with their jobs and family responsibilities while taking classes during the day at Duke.

About 400 graduate courses in 36 academic departments are available in the fall and spring semesters, Dr. O'Barr said.

The part-time studies program is available to persons who want to pursue a master's or doctoral degree, as well as those who wish to take occasional courses without working toward a degree. Most of the students in the first contingent are taking one or two courses a semester, Dr. O'Barr said.

"The quality of students is excellent, reflecting the large number of talented people residing in the Research Triangle Park area," Dr. O'Barr said.

At least thirty of the students have indicated plans to continue in graduate degree programs at Duke or elsewhere, she added.

For Mrs. Elinor Laitman, a wife and community leader in Raleigh who finished college 24 years ago, the part-time program "is very stimulating. There's very little red tape and the professors are encouraging to me."

Mrs. Laitman is taking two courses in anthropology to see how that discipline jibes with her interests, and says she is beginning to think about working toward a doctorate.

Another part-time student, Ms. Rosemary Cook, coordinates computer and data processing programs at Durham Technical Institute.

She enrolled in the program to upgrade her knowledge of semiconductor devices, the tiny "brains" of computers. Her course is taught in the department of electrical engineering.

Ms. Cook said the program's flexibility has been helpful to her, since she didn't have to go through a formal admissions process just to take one graduate-level course.

"Enrolling through continuing education is a good way to do it," Ms. Cook said.

Dr. O'Barr said the Office of Continuing Education provides academic advising on an individual basis for part-time graduate students, as well as tutorial groups for building study skills and various types seminars designed foster career and social development.

Detailed information on Duke's graduate programs is available from the Graduate School office in the Allen Building or from the Continuing Education Office at 107 Bivins Building, phone 684-6259, Dr. O'Barr said.

Brooks Promoted To Major General

PHILADELPHIA — Army Brig. Gen. Leo A. Brooks, commander of the Defense Personnel Support Center here, has been selected for the rank of major general. His promotion to the two-star rank becomes effective early this year.

His selection, along with 22 others now serving as brigadier generals, was announced by the Department of the Army, Washington, D.C.

DPSC is responsible for keeping America's servicemen and women and their families

supplied with food, clothing and medical items worldwide. In the last fiscal year DPSC spent \$4.6 billion for the items. DPSC has 4,900 employees, most of whom are in Philadelphia. The others are buying officers ranging from Hawaii to Europe and nineteen states.

Gen. Brooks came to DPSC from Fort Lee, Va., where he directed the Army's commissary system. The system comprises stores in 33 states and ten foreign coun-

tries, which are operated by 10,000 employees.

In previous assignments he was commander of the Sacramento, Cal., Army Depot and commander of the 13th Corps Support Command, Fort Hood, Texas. He served two tours in Vietnam.

He received a bachelor's degree in instrumental music education from Virginia State University, Petersburg, Va. He was designated a distinguished military graduate from the Army Reserve Officers Train-





ing Corps, where he received a commission as a second lieutenant in 1954. He is the school's first graduate to become a two-star general.

In 1966 Brooks received a master's degree in financial management from George Washington University, Washington, D.C. He also is a graduate of the U.S. Army Command and General Staff College and the National War College. He was graduated from the former Barker-Gray High School, Alexan-

dria, Va., in 1950 and was the school's only graduate to become a general.

His awards include the Legion of Merit (with two Oak Leaf Clusters), the Bronze Star Medal, the Meritorious Service Medal, Joint Service Commendation Medal, and Army Commendation Medal (with Oak Leaf Cluster).

He and his wife, the former Ms. Naomi E. Lewis, also a native of Alexandria, have two sons, Leo Jr. and Vincent.

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NCR-54 REDEVELOPMENT PLAN PUBLIC HEARING

Date: Monday, January 11, 1982

Time: 7:30 P.M.

Place: City Council Chamber, City Hall



The Durham City Council acting as the Durham Redevelopment Commission will hold a public hearing to receive comments on proposed amendments to the Redevelopment Plan for N.C.R.-54, also known as Project Three of the Hayti-Elizabeth Street General Renewal Area. The project area is bounded by Pettigrew Street on the north, Fayetteville Street Housing Project on the east, Piedmont Street on the south, and Roxboro Street on the west.

The proposed amendments will be presented at the public hearing by city staff, and citizens will have the opportunity to comment on the proposed amendments or submit alternative proposals.

Copies of the proposed amendments to the Redevelopment Plan are available for public inspection in the Planning and Community Development Department, 2nd floor, City Hall. Also, the Planning and Community Development staff are available to explain the proposal to anyone who may be interested.

For more information, call the Planning and Community Department at 683-4137.

Margaret M. Bowers
Interim City Clerk