



# Youngsters Speed Through Fast-Paced Summer Programs

NANCY S. OLSON

Gifted seventh-graders complete high school math, science, or writing courses in three weeks.



**A**t a small college in the midst of southern Maryland's tobacco fields, 222 gifted 11- to 14-year-olds from all parts of the country converged last summer for fast-paced three-week programs in mathematics, writing, or science sponsored by Johns Hopkins University.

Some students completed algebra I and II in three weeks. Others completed the whole high school math curriculum from algebra through beginning calculus.

"The idea is to complete as much pre-calculus math as you can," said a 13-year-old boy from New Jersey.

"Since everybody moves very fast,

*Nancy S. Olson is Senior Editor of Educational Leadership.*

you may be on a course like trigonometry for, say, three days," according to a 12-year-old from Connecticut.

"In math there is *never* whole-class instruction," emphasizes William Durden, director of both the summer residential program and Educational Programs for Intellectually Gifted Youth of the John Hopkins Office of Talent Identification and Development. Durden is also Assistant Professor of German at Hopkins.

#### **Math Classes**

When mathematics students arrived at St. Mary's College, site of the three-week program, they were tested to determine their level of math achievement. "Many know math be-

fore they have class," says Durden. "They can deduce what comes next in another whole sequence. One boy took the diagnostic test and got a perfect score. He was 12."

After the initial testing, students are given college-level texts at their level of math ability: "We give them the book and they go," says Durden.

For each of the seven math classes of 25-30 students, there are one instructor, one teaching assistant, and one junior mentor. Math instructors range in age from 15 to 20 years old; one teaching assistant is a 13-year-old sophomore at Princeton. Junior mentors are from 12 to 20 years old and have all been in the program themselves. The chief math instructor is a 20-year-old Ph.D. from Duke who was identified in Julian Stanley's



Talent Search (see pp. 101-106).

Of the 122 math students, boys outnumber girls four to one. Girls outnumber boys three to one in humanities. Minorities account for less than 5 percent of the 222 students—with a high proportion of Chinese.

### Writing Skills

In a Writing Skills II workshop one of the assignments during the second week of class was to write an anecdote arguing Kenneth B. Clark's position on the poverty of media without using direct statements of opinion.

Instructor Deborah Tall, who teaches at the University of Baltimore during the year, has students spend under an hour a day in class writing. "Most of the time they're talking," she says. "They're very good at criticisms. Our ground rules are, though, that students must compliment first, then offer 'constructive revision.'"

Each evening at St. Mary's she has them write for another hour or hour and a half. In their own schools students are taught grammar, Tall says; only one or two do much writing.

How do these students differ from her university classes? "They're much more eager. In three weeks you can really see the effect of what you're teaching."

### Etymology

Part of the writing curriculum for first year students is etymology. Students study Greek and Latin prefixes, stems, and suffixes—Latin in the morning and Greek in the afternoon, alternated with a day of writing. Maximum class size in the humanities is 15 students for one instructor.

Students use a college-level text, but work at a faster pace than college classes. "We also use elements in a more creative fashion than college classes," explains instructor James DuSel. "For instance, students make up their own new words as one exercise."

DuSel teaches at a private school in Baltimore during the year and is completing a dissertation at Hopkins dealing with ancient Greek family structure.

All writing instructors are published writers or poets, and most have secondary school teaching experience as well. "This teaching experience is critical in the humanities program,"

says Durden. "Humanities instructors need to have more experience in order to teach. Scholars in the humanities achieve their best work later."

Not so in math. "Because math is sequential, linear, teachers can perform without personal maturity. Mathematicians achieve their best work at an early age, say in their early 20s," he says.

### The Students

Youngsters selected for the summer residential program score higher on college entrance tests than most college-bound high school students. To enter the humanities program, for example, students in 7th grade, or of 7th grade age in a higher grade, must score 500 out of 800 possible points on the verbal SAT and 40 out of 60+ points on the Test of Standard Written English.

"In math some students score in the 600s on the SAT. Some get a perfect 800," says Durden.

Many students are also highly talented musically. "At night they escape to the hall to practice their instruments," says Durden. "They can sign up for instrumental practice as an activity. One math student is also a junior tennis champion from New Jersey."

Parents pay \$675 in addition to transportation costs to St. Mary's. There are some scholarships available and Durden hopes to expand scholarship resources. Seventeen teachers and 27 counselors try to make things run smoothly.

Classes meet from 8:15 to 11:30 and then again from 1:00 to 3:45. In the evenings students study if they want, and most do. "If they're slack or daydreaming during the day, they're assigned to study hall," says Durden. During this two-hour period students from all programs—math, writing skills, paleontology, and marine biology—are brought together. They also room with students taking other subjects.

There are three rules at St. Mary's. 1. All dormitory room doors must be left open. 2. No drinking or drugs. 3. No Dungeons and Dragons (a popular game).

"Dungeons and Dragons has become an obsession," says DuSel. "It's outlawed because it diverts too much time and energy. It saps their minds; they exhaust themselves with it."

### Lunchtime

"Step into reality," says Durden opening the door to the cafeteria where 222 high-energy adolescents are on a collision course with the tables and chairs and each other. They load their trays with plates of french fries, hamburgers, fishsticks, red and green jello cubes. They shout to friends across the room, dart here and there for napkins to sop up spilled cherry drink, a plastic fork to replace the one that broke in half in the bread pudding.

After lunch, Writing Skills II quietly resumes. The boys are seated around half of a large conference table; some write on their lined tablets, one leafs through a copy of *One Flew Over the Cuckoo's Nest*, another studies an instruction sheet for Dungeons and Dragons. The girls enter and seat themselves around the other half of the table.

Instructor Deborah Tall asks if someone will read aloud Ian's untitled poem about death and several volunteer immediately. The poem is read and discussion begins.

"Too much blackness, darkness, and deep brownness," observes one boy. Praise first, then criticize, he is reminded.

The students are generally pleased with the poem and with an essay about it, another student work. One girl illustrates the illogic of one of the essay's conclusions: "It's like when you start out making a scrambled egg and then decide you want it fried. It doesn't work."

"Oh, Phyllis," her classmates groan. "What a simile!"

Instructors are disturbed by the quantity of science fiction and gothic romances students choose to read. "It's an overdose and it's indiscriminate," says DuSel. Durden recalls one girl who read 90 "junky romances" during the three-week program and is trying to divert this poor taste in reading material by adding a Critical Readings course to the Hopkins fall program for gifted students. Believing "there is an intellectual heritage that should be pursued," he intends to incorporate the writings of Dickens, Shakespeare, O'Neill, Hawthorne, and Twain.

### Curriculum Additions

Next summer Durden will add "strict" science to the curriculum. Students



A 13-year-old math student from Bethesda, Maryland, discusses a trigonometry problem with a teaching assistant.

will move through high school biology, chemistry, and physics in three weeks. A six-week German course will be offered and a course in creative writing for students who have had the first two years of expository writing. Math students will be offered an evening writing seminar.

"Our purpose," says Durden, "is to find a curriculum that could then be taken and applied to normal school systems to affect quality education in the United States.

"We want to find subjects that should be in a pre-collegiate curriculum. For instance, etymology. In a way we're bridging the secondary-university experience. Should high school be shorter? Are we keeping students too long? Our experience is that yes, in some cases in math and



*This junior mentor assists math students when needed, last year he was in the program.*

verbal skills, we are keeping them too long. There's so much repetition.

"My job is to remain aware of developments in the academic disciplines. My degree is in an academic discipline, not in education; that was a requirement for this job.

"What we do is read such things as the Rockefeller Report on the Humanities, we talk with people across the country. In cooperation at times with an advisory committee composed of professors from departments at Hopkins, we make choices about what a good program should include.

"The math program was developed by Julian Stanley. In the humanities we decided that writing, reading, etymology, and foreign language instruction are important. We decided

that Chinese is an important language to have by reading *The New York Times* and *The Washington Post* and by talking with people at the Department of Education under the Carter administration." Classes in Modern Chinese are included in the fall gifted program at Hopkins.

"We're planning a curriculum that will deal with the history of ideas in major historical epochs as part of what's important in the humanities. We are affirming a traditional education."

#### Student Comments

What do students like least about the program? What else? "The food." "And the lectures are so boring," says one girl while her friends nod agreement.

"In my gifted and talented class at home we don't get as much attention," says a 12-year-old boy from New Jersey. "This is more like a special class—the focus is so intense."

One girl entering a private high school in Virginia in the fall says, "This is my second year and I'm glad I'm here. I get bored in the summer. I even forget things, you know, like prefixes and suffixes."

"What I like most, says a 12-year-old girl from Virginia, "is the homework. There's a lot of it. I like that." ■

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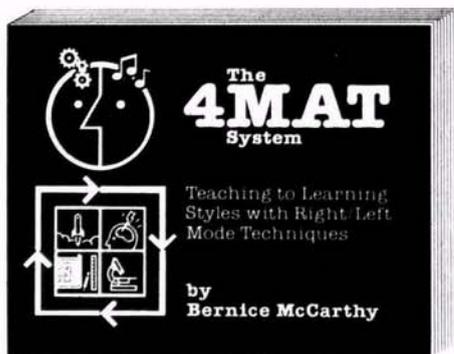
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