

Science-Prize Finalist in Family Tradition

By LEE DEMBART

Arthur Lander, a 16-year-old senior at John Dewey High School in Brooklyn, was in Washington yesterday demonstrating the biology project that brought him to the finals of the Westinghouse Science Talent Search and a possible \$10,000 scholarship.

The extraordinary part is that Arthur's brother, Eric, walked off with the \$10,000 prize last year and is now a freshman at Princeton studying mathematics.

"It wasn't that bad, being Eric's younger brother," Arthur was saying one night last week at his home in the Flatlands section. "I never resented him. Generally I tried to be myself. I tried not to live off anyone's reputation. But it's also one of the reasons I went to a different high school." Eric went to Stuyvesant.

"It's a strain on teachers, too," Arthur went on. "They look at me and say, 'I have to treat him like a person, but every time I look at him I see his brother.'"

Arthur has an insight into how teachers think because his mother, Rhoda Lander, teaches at Abraham Lincoln High School in Brooklyn.

Independent Thinking

"As to where they got it," said Mrs. Lander, whose husband died six years ago, "God only knows. I'm a social studies teacher, with a law degree. I practiced law for a while. The last thing I remember about science, I think is $E=mc^2$. My contribution has been to give them dimes to have things Xeroxed.

"I think I'm very lucky when I see how some children turn out. My sons are more interesting than most adults I know."

The Lander home is very comfortable, suffused with love, not the familiar suffocating kind, but the liber-



The New York Times/David Strick
Arthur Lander with part of science project that placed him in Westinghouse science finals in Washington.

ating kind. The children were encouraged to pursue their own paths, and were left alone to do so.

In his Westinghouse project, Arthur sought to analyze a pigment in a mutant strain of the bacteria *Salmonella typhimurium*, a mutation he had created himself last summer by subjecting the normal bacteria to ultraviolet light. He still has not discovered what the pigment is, but to him the search was at least as important as the answer.

"I learned so much more doing the project than I could have learned in five intensive courses in the same time," he said. "I learned about when to make guesses, when to check and double check, all sorts of basic

the right amounts, it's heating the right amount, it's knowing which things to add to make something come out better. In one case it's chloroform, in another it's orange juice.

"I was making a chicken cutlet, and I put too much orange juice in and it tasted too acidic. So I said, 'What's a base that I can neutralize it with?' Milk. By adding small amounts I neutralized the acid, and it came out delicious."

Playing the piano came naturally. He never took a lesson. When Arthur was a child, a neighbor showed him where middle C was, and he began playing. Now he has written three musical shows, and he acts in the high school repertory company.

"I'm interested in music a lot, and theater," Arthur said. "I like math, and will get a year of college credit for my calculus in high school. I like American history. I like languages a lot."

Early Science Interest

"I enjoy the science of psychology, but I don't enjoy what's done with it. It's overflowing with terms and underflowing with ideas. I enjoy applying psychology to literature, but I don't read for enjoyment as much as I should. It's a habit I'll have to develop."

Arthur's interest in science goes back to grade school. "Eric and I once had to make a papier-mâché model of the solar system," he said. "In sixth grade I had to do a thing on DNA and chopped up some hula hoops to make a double helix."

But it was in high school that he met a teacher named Alvin Haber, who taught him microbiology. "He gave me

an appreciation of bacteriology and science," Arthur said, "of working with your hands instead of a textbook and of answering your own questions and doing your own work."

At John Dewey there are no grades, so it is impossible to say what Arthur's average is, but he did score 740 on the verbal college boards and 770 on the math. He hopes to study biology in college and get a medical degree, then do research.

As to how he and his brother managed to get along so well, Arthur's answer was simple: "We never got so involved in school that it mattered very much," he said.