

East S.J. schools need resources to develop science fair projects

NO MONEY for paper towels. That's what I kept thinking about as Heidi Black and I toured the science classrooms at Piedmont Hills High School. Laboratories need paper towels. But there was no money in the budget.

"The students bring paper towels from home," Black said. She pointed to a cabinet. It had several rolls of paper towels stacked like precious metals.

She is the first and only "science fair



coordinator" for the East Side Union High School District. Her job is to get all 10 East Side high schools into Silicon Valley's bigger and better science competition next year. Only one East Side school has participated regularly.

A recently published survey found that the number of American college graduates earning science and technology degrees is dropping. This is not news Silicon Valley wants to hear. It already
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Source for new scientists needs money for paper towels

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has trouble filling high-skill jobs, and you can import only so many foreign engineers.

Nobody can explain the declining interest, but we do know where to find a great, untapped pool of potential scientists and technicians — the East Side high schools. Here are Silicon Valley's emerging and optimistic minorities, the kids from working-class and middle class families who want them to become professional somebodies. So do principals, the school board and valley CEOs.

"Everybody has high expectations for the students, especially government and industry," Black said. "But nobody's giving them the tools they need."

The best way to learn science is by pursuing individual projects, by experimentation, by trial and error. Regular classrooms aren't set up for projects. Science fairs and competitions are ideal. But that's easier said than done on the East Side.

Black and I walked to Bob Towle's biology class.

"Science fairs? I like science fairs," he said. "But you need time to spend with students on their pro-

jects. We don't have that amount of time here."

I believe him. Towle teaches five classes. Each class has 32 students. Let's do the arithmetic. That's 160 papers to grade after every test or quiz.

At least one CEO sees the raw science talent on the East Side and how to begin tapping it. Aart de Geus of Synopsys Inc., in Palo Alto, has committed \$3 million to expand the regional high school science fair and competition. A chunk of that money, maybe even half, will go to the underrepresented East Side schools. In a smaller but important contribution, Nextlink Communications Inc., is paying Black's salary while she takes a year off from teaching to spearhead the East Side science projects.

To jump-start the new fair, Synopsys brought scientist and author Homer Hickam to NASA/Ames Research Center on Tuesday. The son of a West Virginia coal miner, Hickam taught himself to build rockets and won the 1960 National Science Fair. The current movie "October Sky" tells his story. After a career as a NASA rocket scientist, he writes books.

"When I heard about this science fair, I said, 'Yes, I'll come and speak,'" Hickam said. "I know how

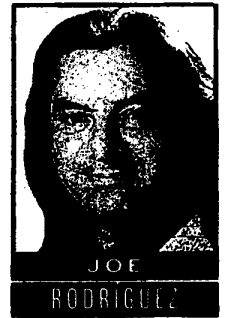
important the science fair was to me."

Black brought some East Side students to meet Hickam. You could say they're the 1990s urban version of himself.

The 56-year-old Hickam said his mining town knew it was dying and wisely gave him and his classmates a good basic education. Silicon Valley isn't dying. That's one big difference. But the valley's aid to local education doesn't match the need or its ability to give, especially at East Side schools.

For example, 250 students at Piedmont Hills High want to study physics next year. There are teachers and rooms for only 180. Science fair projects require research, but none of the East Side school libraries has high-caliber science books or journals.

Synopsys' \$3 million is just a start. For a regional economy built on brainpower, science education here is shamefully underfunded. Anyone have some extra cash for paper towels?



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