Newsday

EDITORIALS "Where there is no vision, the people perish."

What's a LIGASE?

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Long Island group aims to improve biology education — and the region's economy.

Molecular biologists are as comfortable with acronyms as are bureaucrats. The big difference is that even when written out, the terms they use—such as DNA (deoxyribonucleic acid) and PCR (polymerase chain reaction) - go way over the heads of the uninitiated. One that seems more transparent is LIGASE, which stands for Long Island Group About Science Education.

The organization is a consortium that brings together the State University of New York at Stony Brook, Nassau and Suffolk Community Colleges, Uniondale and Brentwood high schools and advisers from Long Island firms specializing in biotechnology. Its goal is to improve biology teaching through a Teacher Enhancement Institute at Stony Brook's School of Professional Development, and a new masters degree program. Then, to attract good students at the two community colleges and the high schools, their molecular biology labs are being upgraded with new equipment, including such things as PCR machines (see above), which are usually seen only in advanced research labs. Students who make it that far will discover the double meaning of LIGASE. Spelled without the capital letters, its a name for a biological catalyst, something that starts things happening.

In this case, the something is the creation of a solid educational foundation for the growing biotech segment of the Long Island economy. Such institutions as Stony Brook, Cold Spring Harbor Laboratory and Brookhaven National Laboratory fostered the first wave of entrepreneurship, and that demonstrated the need for trained workers.

Cold Spring Harbor Laboratory has an eight-year-old Partners for the Future Program that brings high school students into its laboratories to spend a minimum of 10 hours a week doing closely mentored original research. In addition to LIGASE, Stony Brook has summer programs in biological science for high school students, and it also maintains a Biotechnology Teaching Laboratory, designed to introduce students to the field.

More such programs are needed, for it is now clear that the classroom is on its way to superseding the work room as the profit center of the next century.