

SYLVIA OLIVER, PHD WSU SPOKANE CITYLAB

Helping Teachers Improve Science Education

Sylvia Oliver is the founder and director of the WSU Spokane CityLab, a fully equipped, laboratory-based teaching and learning center that provides experience in inquiry-based teaching methods and laboratory instruction in biology, chemistry, and biotechnology.

Oliver believes that the nation's shortage of scientists, engineers, health scientists, and math/science teachers can only be addressed by a systemic solution—one that increases public understanding of careers in these areas, enhances the K-12 experience in math and science, impacts the practice and preparation of teachers, and supports successful transition into university programs.

CityLab is such a solution. It introduces students to biology, chemistry, and biotechnology problems through workshops such as "The Case of the Crowned Jewels," an exercise involving CSI analysis of DNA, and Raider of the Lost Arch(eology), which has kids performing a protein analysis. It has also contributed content and materials for after-school science clubs established in 25 elementary schools in Spokane School District 81.

In addition, CityLab provides specific enrichment opportunities for young women and other students underrepresented in the fields of science and math. Young women's summer science camps stimulate student interest by involving them in the application of academic knowledge to real-life problems. CityLab has also conducted projects targeted at Native American students from the Spokane, Kalispell, and Coeur D'Alene tribes.

Outreach to teachers comes in the form of professional development workshops. An equipment loan program provides CityLab-trained teachers with free access to specialized research-grade biotechnology equipment, as well as workshop protocols or assistance with protocol creation.

To achieve its goals, CityLab partners several regional and national entities.

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