

C-MORE GEMS Report
“Microscopes for SEEQS Life Science Curriculum”
School for Examining Essential Questions of Sustainability (SEEQS)

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The aim of the project, titled “Microscopes for SEEQS Life Science Curriculum”, was to supplement our curriculum with hands-on scientific experience in our school’s inquiry- and issue-based, sustainability-focused science curriculum. The project began at the start of the school year (August, 2014) and is on-going.

The students at SEEQS received six Ken-a-Vision Prepscope 2 microscopes as requested through this grant. We combined the use of microscopes with our SEPUP (Science Education for Public Understanding Program) Life Science curriculum, specifically in the Cell Biology and Disease unit. In this unit, students learned about cell size, structure, function, and the different systems of classification. As part of the curriculum, students utilized the microscopes by examining different microbes (bacillus, coccus, amoeba, etc.) under 4x, 10x, and 40x magnifications. This allowed them to closely observe the differences in cell structures among these organisms. After establishing predictions, students noted their initial observations, then illustrated what they saw under each magnification.

Additionally, some of our students have been using the microscopes to analyze plankton they have gathered from local beaches during our EQS (Essential Questions of Sustainability) blocks. During these sessions, groups of students collected and investigated the plankton community in a nearby beach that has particular meaning to them. In this way, students are able to understand what exactly resides in the water that they fish, play, and swim in. This process helped students develop data collection and analysis skills, as well as providing real world opportunities for science-related inquiry.

The use of the microscopes purchased as part of this grant has been beneficial in relaying the importance of microbes to our students. The microscopes provided a visual learning experience for our students within the Cell Biology and Disease unit of the SEPUP curriculum. We plan to use the microscopes as part of the 7th grade Life Science curriculum each year, as well as for specific projects during our EQS blocks.

