

Incorporating Microbial Biology into Science Fair Activities and More
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After completing the STARS cruise with Jim Foley and some other teachers, I had a greater understanding of the importance of microbial biology and the methods for researching it. Upon returning, some of my 6th grade students did their science fair projects on microbiology.

The projects they researched included the following:



microorganisms in pond water
Students took samples of pond water and looked at it under the Motic microscope, donated to the school through the Microscopes for Middle Schoolers program. Students took pictures and video of developing organisms and tried to identify them. It was exciting to see things moving around under the lens and to see cells growing and dividing!



Black soldier fly larvae
Students left fruit waste in a dark shaded container to see if they could get black soldier fly larvae and they did! They found that exciting.

This year my 7th graders (Life Science) are going to create indigenous microorganisms in composting soil and then look at them under a microscope to study fungi and bacteria. My 8th graders (Earth and Space) will be conducting an experiment on the speed of decomposition of various mixtures of compost. Included in these mixtures will be microorganisms, worms, and fruit waste. This is part of their study of soil. Another purpose for doing this experiment is to give them skills in creating their own soil in a place where there is so little soil – a volcanic island which is constantly in the process of creation. By observing the varying rates of decomposing soil, they will learn about how various materials in compost can speed up or slow down the process and how they can look at their own “waste” differently and see it as a resource.

On our campus, we grow microorganisms and create various “teas” to fertilize our plants. We realize how vital microorganisms are to the health of our soil and our ocean, and we try to teach our kids how people have destroyed the soil over time and microorganisms can help to restore its health.