

How will rain affect water quality?

A collage of environmental and scientific images. At the top, a fish is shown swimming. Below it, a pH scale is visible with numbers 4 and 5. To the right, a radiation warning symbol is present, along with the text '0 JTU', '40 JTU', and '100 JTU'. A test tube is also visible, with the word 'negative' written vertically on it. The background is a mix of blue and purple hues.

The Environment and You

The Stars Challenge at Monmouth University 2008



We began by looking into some of the ways decisions humans make are impacting the natural world. We also shared some special natural places to understand just what was at stake.

Whale Pond Brook, the stream that runs through Monmouth University, was targeted for intensive investigation. Fun was had by all as we suited up in waders that seemed two sizes too big and ventured into the mud. Some of us developed a talent for getting stuck and required repeated rescue. Serious science followed as we calculated rates of stream flow, surveyed macroinvertebrates, and took water samples for chemical analysis. Our findings were mixed. The rampant development around the watershed has negatively impacted the water quality and loss of biodiversity has occurred. However, the watershed did seem to be moderately healthier than the previous year, which indicated that some of the steps being taken by the community were having a beneficial impact.

Before time ran out (and we never seemed to have enough time), we studied Global Warming. We manipulated carbon dioxide levels and measured heat retention in experimental atmospheres. We also experimented with changes in land use and how the color of the ground influences local heating. We discussed the urgent need to develop clean sources of energy. We also prepared entries to the Jersey Shore Science Fair, many of them on environmental topics, so we could extend our stewardship ideals into the future.

Tread lightly on the Earth. Remember that your decisions have consequences. Take care of this precious blue world, the only home you'll ever know.

It's been my honor and pleasure to work with you.

E. Marc Coe



Exploring Whale Pond Brook — the water, flora, fauna, and the mud.





Searching for macro-invertebrates to determine the health of Whale Pond Brook.





Analyzing the brook for e coli, phosphates, and nitrates.





We celebrated the arrival of Mr. Coe's new daughter Emma with doughnuts.



Identifying the various macro-invertebrates.



It's fun to get stuck in the mud!



The discovery of Herbert.



Working in the lab at Monmouth University.







Making biodiesel at Cedar Drive School.



Analyzing the effect of different color and different carbon dioxide levels on global warming.





The Stars Challenge



Made on a Mac