



Yale-New Haven
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2010 Volume III: Geomicrobiology: How Microbes Shape Our Planet

How Microbes Help Ecosystems

Guide for Curriculum Unit 10.03.02
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The purpose of this unit is, through direct experience with various microbes, to introduce middle-school students to microbiology. Students will be participating in lab activities, recording observations and notes in an interactive notebook, and researching basic concepts of microbiology to gain a better understanding of the world around them, especially those living organisms that are not visible without microscopes.

The unit includes background information about: basic microbiology, bacteria, archaea, ecosystems, nutrient cycles of water, carbon, nitrogen and oxygen, useful microorganisms, relationships between living organisms, and the microbes that live in Long Island Sound. Sample lessons and activities are designed for active participation by students, using their five senses, where applicable, to discover the world of microorganisms. Use of the interactive notebook is recommended to enhance students' understanding of the concepts presented.

(Developed for General Science, grade 6; recommended for General Science and Life Science, grades 5-8)

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