Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Looking for Answers, Asking Questions with Data

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Students need practice in becoming active problem solvers in mathematics. Too often they believe that there is one correct way to look at a problem and so they distrust their ability to make sense of a problem. They are often reluctant to follow a path of inquiry, ask questions, or propose solutions. Biology and general science as well as math and statistics are important subjects for students. Helping students to succeed in these subjects has much to do with their comfort in asking questions and crafting problem-solving methods that will lead them to productive answers.

This unit will examine theories of why and how people inquire, and how as teachers we can cultivate the asking of questions. I will talk about the way that questions can turn into plans to find answers. I will look at this process in the math classroom. I will also examine the way that asking questions and seeking answers has changed for students who have constant access to looking up information. I will relate this to the way that asking questions through data has changed in the era of online data collection. This unit will also outline strategies to use in the classroom to create a culture of asking questions to help students be persistent problem solvers.

(Developed for AP Statistics, grades 11-12, and Statistics for Health and Business, grade 12; recommended for Statistics, grades 10-12)