



## Reasoning & Sense Making Using High School Math GEs: Revamping your Grade 9-10 Math Course for All Students (aka "NO GE Left Behind: Aligning the GEs to Your High School Math Program")

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Appropriate for Grade 9-10 Math Teachers

### About this Course:

For the last three years, the NECAP has been administered to Vermont's 11th grade students with disappointing scores in mathematics. This may be due in part to the traditional high school course offerings and the course taking patterns of many high school students. In order to do well on the NECAP exam that is given in the fall of the 11th grade year, by the end of 10th grade all students must have been given the opportunity to learn and master the mathematical concepts and skills that are reflected in the High School Math GEs. If the NECAP is meant to assess what high school students know and are able to do, we have to consider that the high school math GEs are, in essence, Grade Expectations for 9th and 10th grade, not 9th through 12th grade.

In addition to teaching students the math content found in the GEs, high school math students are also expected to be able to make connections between the concepts and hone their reasoning skills within the context of mathematics. In the Fall of 2009, NCTM published Focus in High School Mathematics: Reasoning & Sense Making, the first in a series of books focusing on thinking skills as a foundation in all high school math courses. We will be using this book as a resource in this seminar.

Learning the concepts in the GEs as well as the accompanying reasoning and sense making skills is expected for ALL students in grades 9 and 10. The goal of the work started in this course will be to examine and possibly revamp the math courses that are offered to students in Grades 9 and 10, ensuring that all students are being provided the learning opportunities necessary for success in meeting the Vermont High School Math Grade Expectations no matter what course-taking path the student embarks upon.

This course is designed so that professionals can work with each other, learn from each other, and create products such as curriculum maps and timelines, units, and assessments that are directly related to their work in their school. Ideally, participants will attend in teams from the same school or district.

Time will be provided for participants to focus on individual school math programs. Participants should bring materials from their 9-10 math program and be ready to roll up their sleeves and get some valuable work accomplished.

### Dates:

June 21-25, 2010  
8:30am-3:30pm

### Location:

LAPDA Meeting Space,  
Montpelier

### Cost:

\$575 for members  
\$720 for nonmembers  
\*Additional \$294 for 3  
Graduate Credits from Union  
Institute

### Registration:

[www.lapdavn.org](http://www.lapdavn.org)

Call (802) 224-9110  
for more information

### About the Instructor

Elaine Watson, Ed.D., a high school math teacher for 16 years and administrator for 9 years, and is now an independent K-12 Math Consultant. She brings a passion for mathematics education coupled with a clear understanding of how skills and concepts in mathematics should unfold for students during their K-12 experience.