



# YALE NATIONAL INITIATIVE

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Curriculum Units by Fellows of the National Initiative  
2008 Volume V: Estimation

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## **Estimation in Ecology - the Horseshoe Crab Census**

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by Brian P. Bell

Estimation is a vague topic in most Math classes, regardless of the grade level. In most of the workbooks that I use with my sixth grade students throughout the school year, we see the word estimation in many of the questions. What we don't see however, is an explanation as to what estimation is, what it is used for, or how to use it. Too often estimation is thought of as merely a guess and not much more. Estimation is in fact not a guess, nor an educated guess, but rather an effective way of calculating an approximate answer to a question. Estimation is based on Math, not on a guess, educated or otherwise. There are several math concepts that students must be familiar with in order to effectively utilize estimation in the classroom including, place value, expanded notation, very round numbers, and order of magnitude. A familiarity with the powers of 10 would be beneficial as well. Using the horseshoe crabs of the Delaware Bay, this unit focuses on the correct methods necessary for teaching middle school students estimation in an exciting and engaging way.

(Developed for Math, grade 6; recommended for Math, grades 6-8)

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