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Kristin L. Umland* (umland@math.unm.edu), Department of Mathematics and Statistics,
MSC03 2150, 1 University of New Mexico, Albuquerque, NM 87131. *Why elementary and middle
school teachers should study Calculus (and what that really means)*. Preliminary report.

In this talk I will discuss the idea of a meta-structure for elementary and middle school mathematics. In an era of increasingly prominent (and detailed) grade-level standards, I will discuss the need for teachers, curriculum developers, and standards-writers to cultivate the habit of regularly revisiting this bird's eye view of the K-16 curriculum. I will then argue that the right kind of Calculus course can help teachers develop such a perspective. Clever lessons on integration by parts will not be discussed. (Received February 05, 2008)