

# Eval Brief: CO-SEED and Academic Achievement at Dennis C. Haley Elementary

*Antioch New England Institute's Community-based School Environmental Education (CO-SEED) Project exposes students to hands-on, real-world learning experiences and strives to strengthen community ties and promote appreciation for the natural world, while enhancing students' academic engagement and achievement. CO-SEED sought to explore the relationship between participation in this place-based education program and student academic achievement, as measured by standardized state tests and other local measures at the Haley Elementary School in Roslindale, Massachusetts. CO-SEED operated at this site from 2003-2006. This brief is part of a larger study conducted by external evaluators from PEER Associates, Inc.*

Three years of interviews, CO-SEED surveys, and other evaluation data painted a clear picture of place-based education becoming a central, identifying feature of the school culture at the Haley, including a particular emphasis on outdoor learning and science. To what extent did this school culture translate into measurable student academic achievement? To investigate that question we looked standardized test scores from the Massachusetts Comprehensive Assessment System (MCAS) in two ways. First, we looked for trends in the Haley's whole school average as compared to district and state averages. Next, we looked at individual student scores to see if students who were enrolled at the Haley for a longer time (i.e. had had more exposure to the Haley's place-based education culture) performed significantly better on the MCAS.

Overall, the analysis showed mixed results. There were several tests which suggested moderate to strong positive effects. These included trends in whole school averages for grade 4/5 Science, as well as patterns in individual student scores for grades 3 and 4 in Math and ELA in 2006, and grade 3 ELA in 2005. However, these positive results did not generate a consistent pattern across the complete range of data and analyses. They were not consistently associated with cohort, subject level, or other activities that could be unambiguously attributed to CO-SEED or related place-based education efforts. The graphs below typify the mixed nature of the results. Correlational patterns in individual student level scores for grade 4 Math were strong ( $\Delta R^2 = .20, p < .01$ ), but Math was not the specific focus of place-based education efforts. During interviews, teachers reported inspirational performance by their students in Science, and whole school MCAS averages show a fairly clear upward trend in grade 4/5 Science scores. Yet correlations between student exposure to the Haley culture and their Science scores on MCAS were flat ( $\Delta R^2 = .00, p > .05$ ).

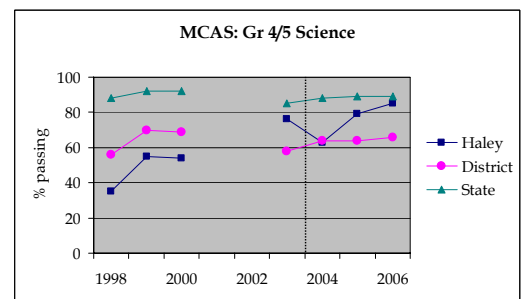
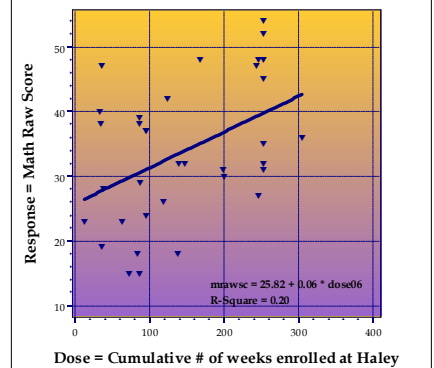
Analysis of aggregate trends in individual student level MCAS scores from 2003-2006 suggest the possibility of positive, cumulative effects of several years of school wide focus on literacy plus recent support from CO-SEED and the Boston Nature Center, but the data are not definitive on this point.

Finally, the body of quantitative data from the Haley (and in aggregate with other CO-SEED sites) clearly indicates that CO-SEED and related place-based education efforts do not compromise MCAS scores as they generate strong reports of achieving several other educational and professional outcomes.

**Table 1. Summary of Haley MCAS Data Analyzed**

MCAS Test Administration	Years of Data Availability Whole School	Indiv. Student
Grade 3 Reading	2001-2006	2003-2006
Grade 3 Math	-	2006
Grade 4 ELA	1998-2006	2003-2006
Grade 4 Math	1998-2006	2003-2006
Grade 4 Science	1998-2000	-
Grade 5 Science	2003-2006	2004-2006
Grade 5 ELA	-	2006
Grade 5 Math	-	2006

**Haley 2006 MCAS Gr 4 Math dose-response**



**Haley 2006 MCAS Gr 5 Science dose-response**

