

## Eval Brief: CO-SEED and Academic Achievement at Beebe Environmental & Health Science School

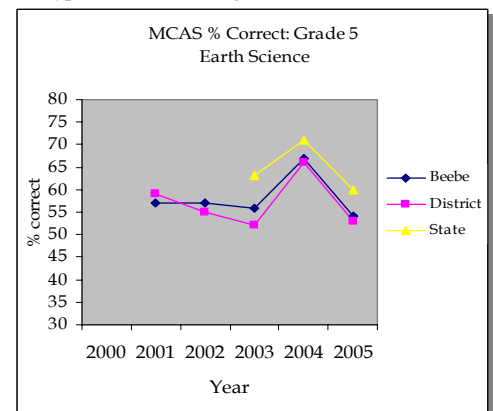
*Antioch New England Institute's Community-based School Environmental Education (CO-SEED) Project exposes students to hands-on, real-world learning experiences and strives to strengthen community ties and promote appreciation for the natural world, while enhancing students' academic engagement and achievement. 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 at the Beebe Environmental & Health Science School in Malden, Massachusetts. CO-SEED operated at this site from 2000-2005. This brief is part of a larger study conducted by external evaluators from PEER Associates, Inc.*

To investigate possible relationships between Beebe students' participation in the CO-SEED curriculum and academic achievement, we compared average standardized test scores of Beebe cohorts to those of Malden School District and the State as a whole, using test scores from the Massachusetts Comprehensive Assessment System (MCAS). Our rationale was that these benchmarks would illuminate patterns in Beebe performance that might deviate from typical District and/or State trends. We tested predictions made by Beebe CO-SEED staff regarding subject areas in which they expected to see increased student achievement as a result of the strong extent to which the CO-SEED program reinforced the Beebe's school theme. These content areas included:

- ❖ Math (Grade 4)
- ❖ English Language Arts: Writing (Grade 7)
- ❖ Life Science (Grades 5 and 8)
- ❖ Earth Science (Grade 5 and 8)
- ❖ Physical Science (Grades 5 and 8)
- ❖ Technology/Engineering (Grades 5 and 8)

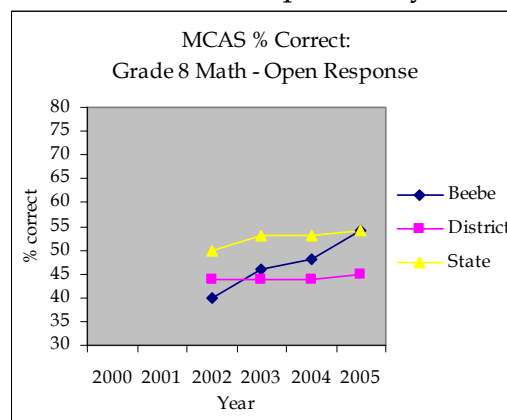
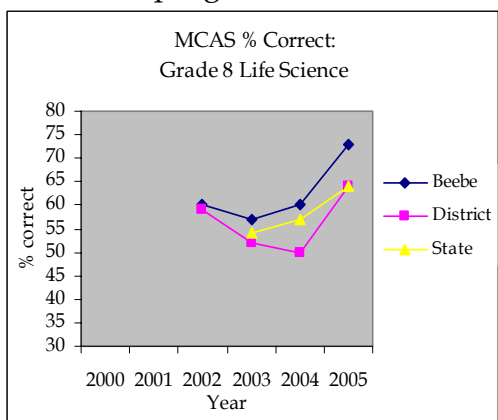
We discovered a typical trend of achievement. On most tests, Beebe outperformed the District, and the State typically outperformed both the District and Beebe (see graph at right).

*The typical trend among Beebe, District, & State:*



We found moderate to strong support for five of the six predictions for content areas with increased test scores. These subjects included **Math, Life science, Physical science, and Technology/Engineering, mostly for upper level grades.** The strongest deviation from the typical pattern of achievement was seen in **Math and Life Science for Grade 8**, in which Beebe is either reaching or surpassing State performance, as shown in the graphs below.

Overall, the analysis provided moderate support for the relationship between exposure to the CO-SEED program and achievement at Beebe School. Specifically, the Beebe CO-SEED



program appears to be having some positive effect on later-grade student achievement in the content areas of math and science.