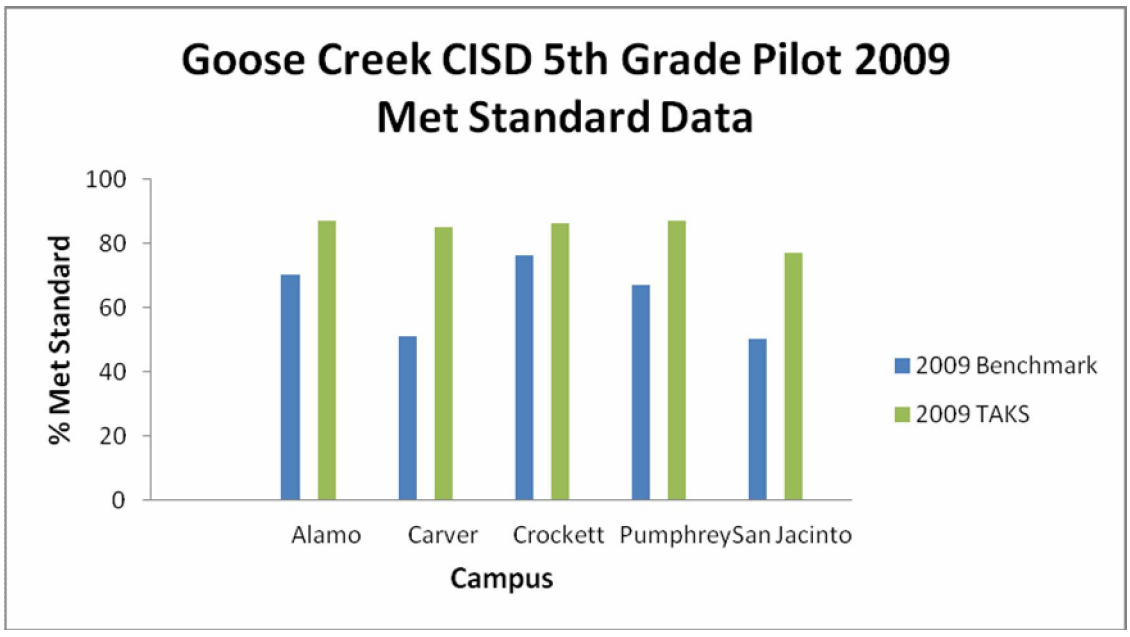
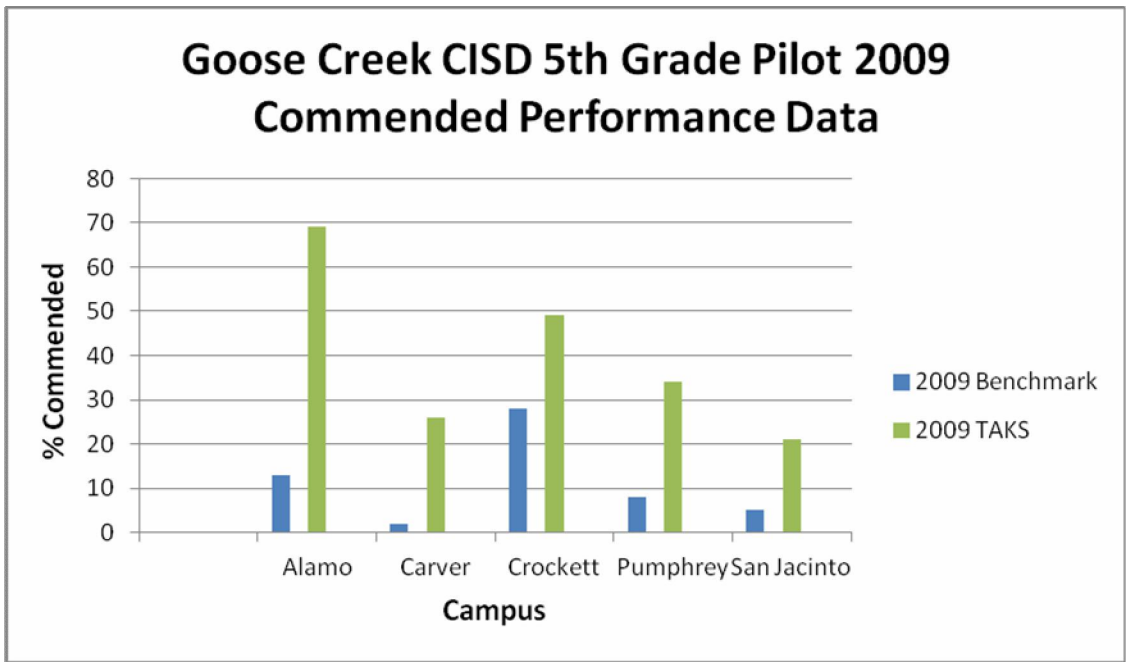
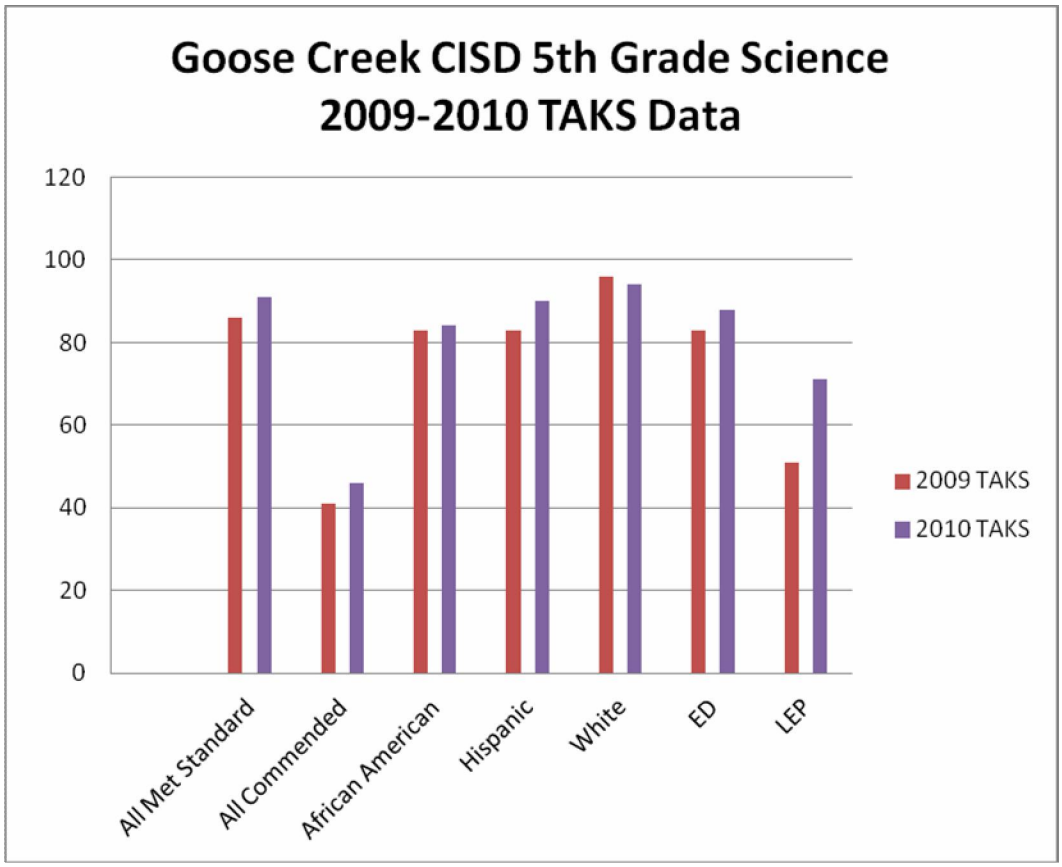
Edusmart Science
Goose Creek CISD 5th Grade Pilot Study Data

In February of 2009, Goose Creek CISD, a school district of approximately 21,000 students located in the Baytown, Texas area, piloted Edusmart Science on five elementary school campuses. At that time, Edusmart Science, which is a multimedia science resource, had just recently been released for piloting. Teachers and campus science specialists used Edusmart Science for whole class and small group instruction in all 5th grade classrooms on the five pilot campuses for approximately six week prior to the state mandated 5th Grade Science TAKS Test (Texas Assessment of Knowledge Skills). A 5th Grade District Science Benchmark exam was administered in early March, and the 5th Grade Science TAKS Test was administered at the end of April. The following graphs compare the 5th Grade District Science Benchmark scores to the 5th Grade Science TAKS scores for both met standard (passing) and commended performance (scores ≥ 90%) for all students on the five pilot campuses.

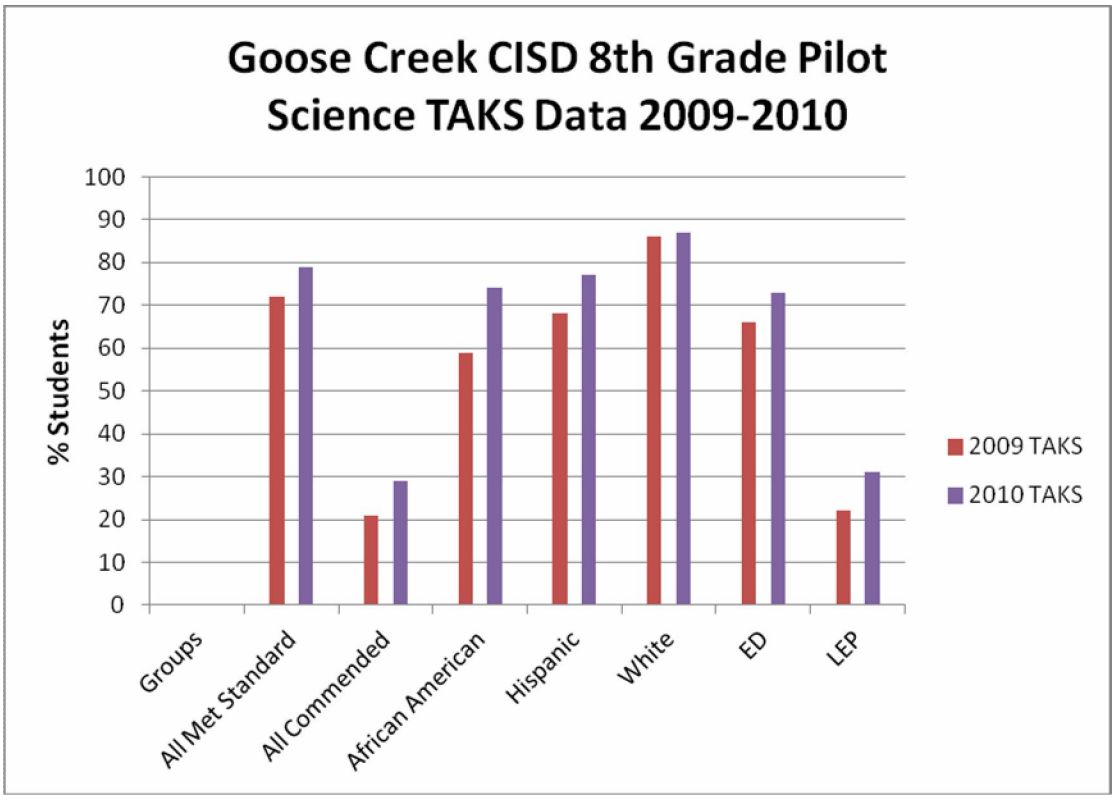




Based on data from the Spring 2009 elementary pilot, in the fall of 2009 Goose Creek CISD adopted Edusmart Science as a district science resource for grades 3-5 and implemented it as an integral component of the district science curriculum on all 13 elementary campuses. During the 2009-2010 school year, Edusmart Science was used as a teaching tool in a variety of instructional settings which included whole class, small group, in centers, as part of the science lab instruction and for RTI with individual students. The following graph compares the district's met standard scores by subpop for the 2009 5th Grade Science TAKS Test to the met standard scores by subpopulation for the 2010 5th Grade Science TAKS Test.



In the Spring of 2010, based on the gains experienced in the elementary pilot, Goose Creek piloted the newly released Edusmart Science for Grades 6-8 on all six junior high campuses. The following graph compares the met standard scores by subpopulation for the 2009 and 2010 8th grade Science TAKS Tests.



Edusmart Science Pilot Project
Summary Statement
by
Candy Ochoa
District Science Coordinator, Goose Creek CISD

In the spring of 2009, we piloted *Edusmart Science* on five elementary campuses as a multimedia supplemental science resource to support the 5E formatted curriculum resource materials that form the foundation of our elementary science program. We discovered the design of *Edusmart Science* effectively supports instruction that employs 5E formatted lessons. The amazing graphics and animations are highly engaging, cue thinking and focus students' attention. The open-ended questioning allows students to explore concepts in light of prior knowledge, allowing our teachers to assess the level of pre-existing knowledge and to identify misconceptions

The information and multiple "real life" examples provide students with concise, yet detailed explanations of concepts presented. The virtual labs and interactivities built into *Edusmart's* modules give students opportunities to practice and elaborate on the knowledge they have acquired.

When evaluating comprehension, we found the TAKS formatted assessments, included in each *Edusmart Science* module, enables teachers to readily assess mastery of concepts presented while providing students with immediate, specific feedback and additional opportunities to understand the content.

Comparing data from the 2008 and 2009 5th Grade Science TAKS Tests for the five pilot campuses indicated to us the addition of *Edusmart Science* had a very positive impact on instruction and student achievement while effectively supporting 5E instruction. We experienced significant increases in *Met Standard Performance* on three of the five pilot campuses as well as significant increases in *Commended Performance* on all five campuses. We also noted that achievement gaps closed for all but one sub-population. Based on these very positive indications, I highly recommend the addition of *Edusmart Science* to effectively support inquiry-based science instruction.

EduSmart MSSELL Statement

Project Middle School Science for English Language Learners (MSSELL) is a research study funded by the National Science Foundation evaluating the effectiveness of an instructional intervention in academic science among 5th grade English language learners.

The intervention is composed of two main components: (a) teacher professional development; and (b) student instructional intervention that integrates English as a second language strategies, questioning strategies, technology, and content-area reading and writing into the 5E instructional model (Engage, Explore, Explain, Elaborate, and Evaluate).

The research team first learned about EduSmart as it was being used on some campuses in the district. Upon further review the research team selected to integrate EduSmart into Project MSSELL enhanced lessons because a) EduSmart is tightly aligned to the state science standards; b) EduSmart visually scaffolds science concepts with animations and simulations; and c) EduSmart is engaging and interactive, keeping the students' attention.

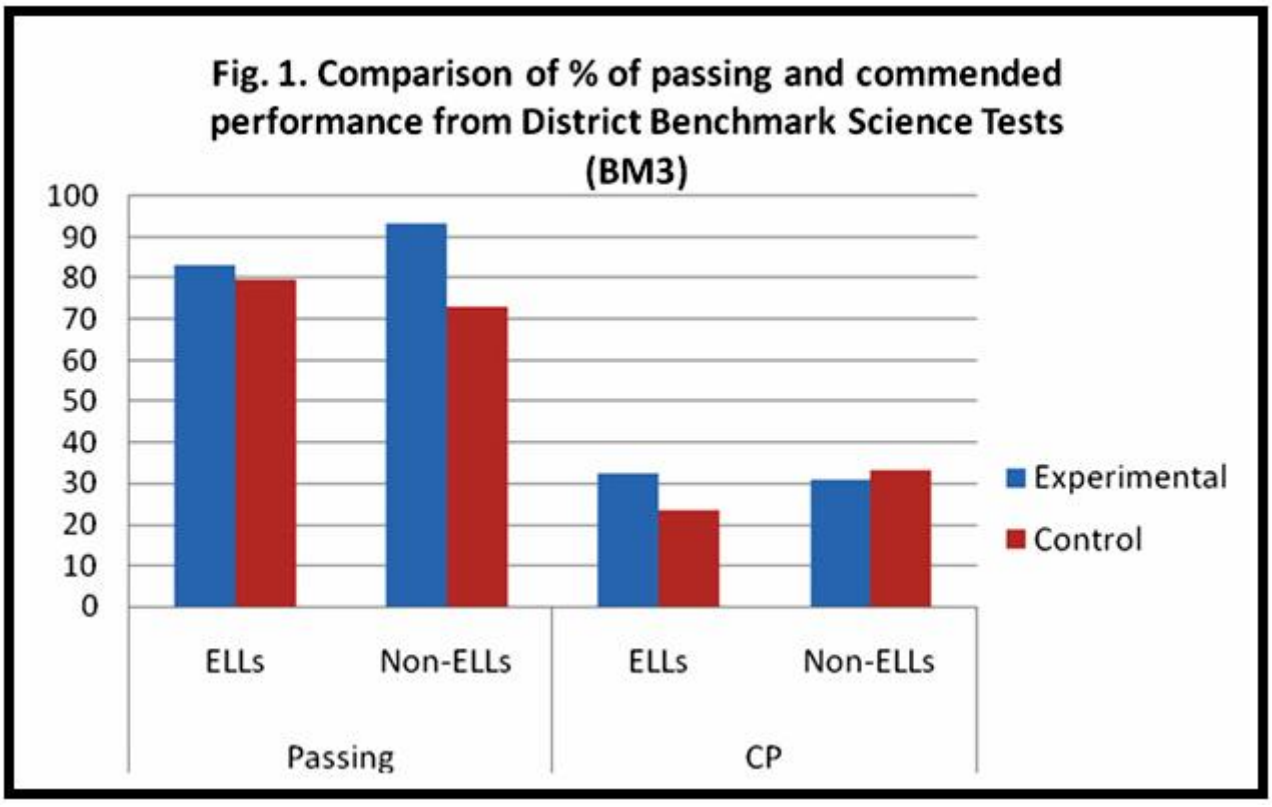
EduSmart was utilized during the 'Explain' portion of the lessons to demonstrate and clarify challenging science concepts. Project MSSELL supplemented EduSmart with additional leveled questions that allowed teachers to monitor comprehension and misconceptions. Additionally EduSmart was utilized during small group tutoring with struggling students.

Cindy Guerrero

MSSELL Project Manager

Project MSSELL
Middle School Science for English Language Learners

- **Longitudinal quasi-experimental study to evaluate the effectiveness of an academic science instructional intervention**
- **Participants: Economically disadvantaged students in an urban school district in Southeast Texas, both English language learners and native English speakers, Grades 5-6**
- **Composed of two main components:**
    1. **Ongoing teacher professional development (bi-weekly)**
    2. **Academic science intervention - 5E model of instruction**
        - **Content area reading in science**
        - **Academic science vocabulary development**
        - **Technology integration**



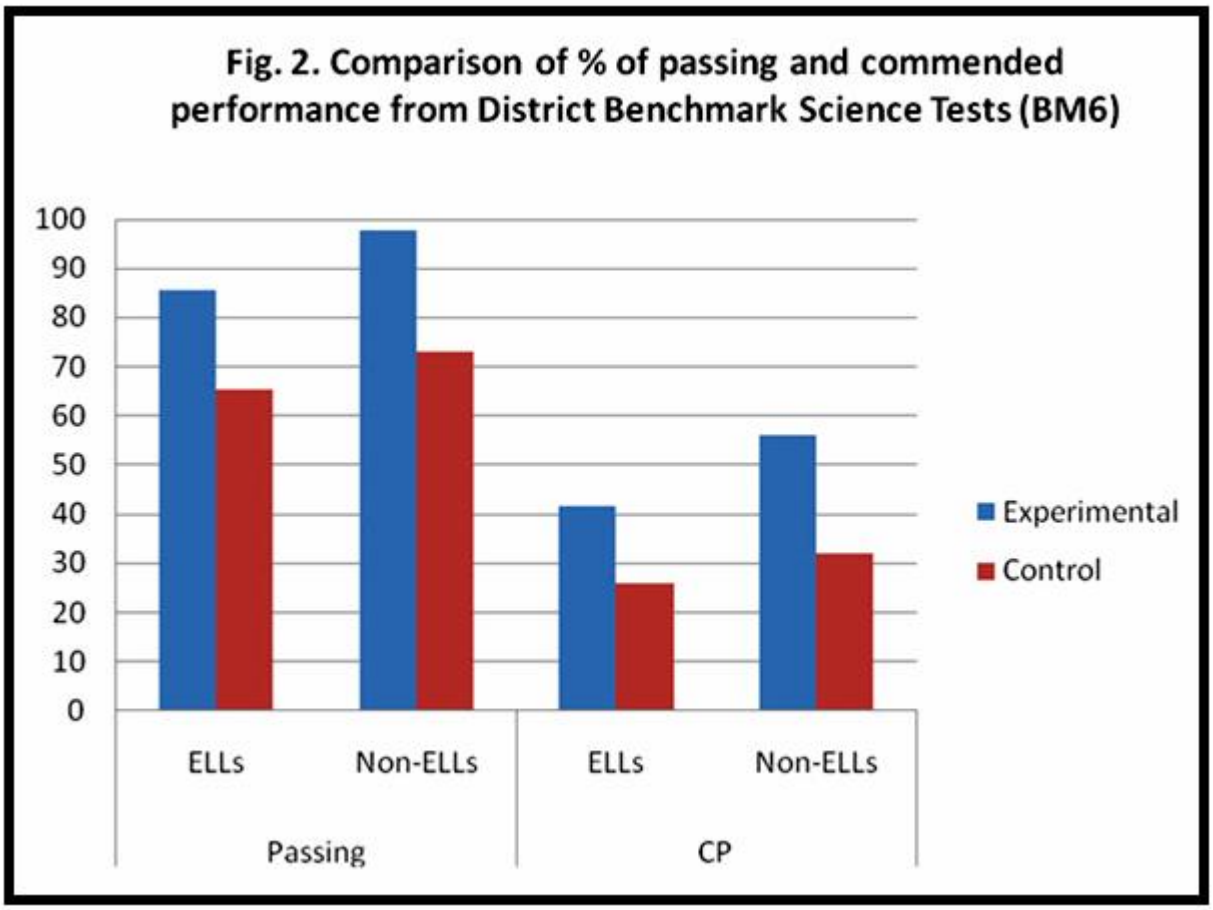


Fig. 2. Comparison of % of passing and commended performance from District Benchmark Science Tests (BM6)
100
90
80
70
60
50
40
30
20
10
0
ELLs
Non-ELLs
ELLs
Non-ELLs
Passing
CP
Experimental
Control