Ignite! Learning
Transforming Classroom Curriculum

Case Study

Submitted By

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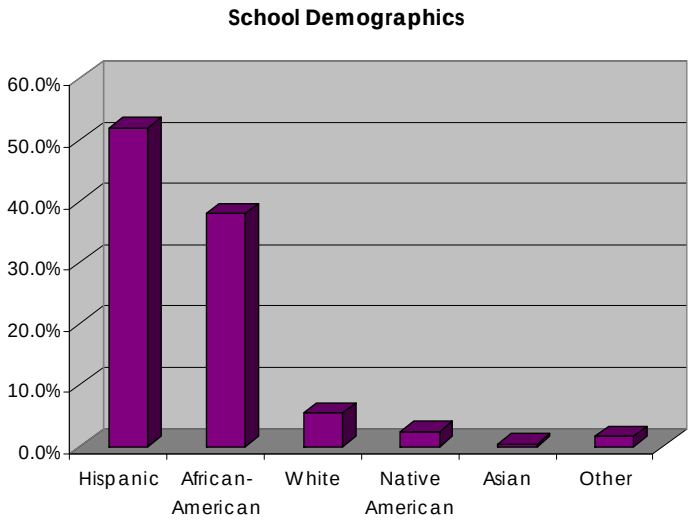
ENVIRONMENT

Independent School District is located in central Texas, right in the heart of the Hill country. Independent serves as the corn capitol of the state and has a very transient population of families. Migrant populations account for a high percentage of ESL students and most are classified as Title I, eligible for free and reduced lunches within the district. Families are often very large and children are expected to contribute to the family earnings through farming before and after school, leaving little time for homework and academics.

Independent serves a student enrollment of 13,000 through ten elementary, 3 middle, and 2 high schools. The district also maintains a Learning Center for struggling students which offers additional academic resources. In the past two years, the district as a whole has performed below the state average on the TAKS test, and many schools are in Year 2 of not meeting AYP.

CHALLENGE

In 2007, Ms. Price was a 7th grade science teacher at one of 3 middle schools within the district. The middle school totaled 800 students consisting mostly of a Hispanic population. The 7th grade class enrollment was approximately 268 and Ms. Price was one of two 7th grade science teachers seeing 122 students on a daily basis. Due to the high ESL population, Ms. Price struggled with ways to reach these learners. Although Science TAKS scores were above passing, the school was concerned about meeting AYP in the next year. Ms. Price was seeing an increase in ESL students over the past 3 years and was concerned with the current science curriculum reaching these students.



She also faced the challenge of engaging her students. Since many worked on the farms to help support their families, often times students came in late, were tired during class, or had high absences, resulting in falling behind in their learning. Her

experience with ESL students told her that in order to engage and motivate her class, the students needed to see the words, hear the words, and visualize the concept to gain a solid understanding of the material.
Using a standard textbook, Ms. Price saw the need for a strong supplemental program which addressed the various learning styles and supported the ESL students in achieving academic success.

One of Ms. Price's students, Miguel, had recently been absent more and more, and when he was in class, Miguel was often disruptive. Ms. Price tired moving him to the front of the class and although his behavior improved, she began to notice him dozing off during instruction time. Miguel was one of 6 children and often worked with his family on the farms. He was successful in as an elementary student, but as he matured, his responsibilities as a family member grew, leaving little time for school work. What free-time Miguel had, was spent hanging out with friends at the local arcade. Although Ms. Price reached out to Miguel's parents, their time was focused on supporting the family and their limited English prevented assistance with academics at home.

Miguel was only one of many students that was falling through the cracks and if Ms. Price was not able to engage Miguel now, he was likely to be a high school drop-out statistic.

IMPLEMENTATION

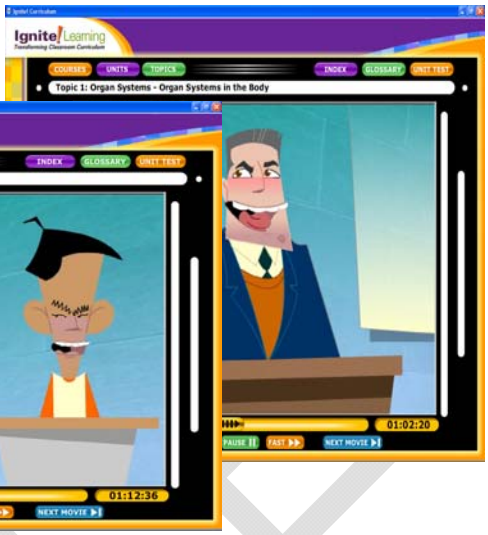
Ms. Price, along with all other Science teachers across all three grade levels, received the Ignite! Science curriculum in November of 2007. The school held a half day implementation session conducted by a subject matter expert who reviewed not only course taxonomy and curriculum use, but also instructional strategies to use with all classroom tools. These best practices included collaborative learning strategies, creating inclusive learning environments, and developing questioning skills to help retention of knowledge.

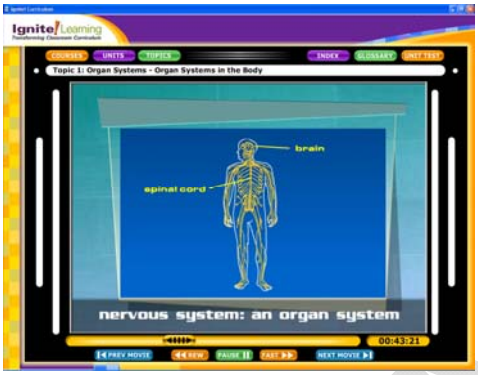
The class was entering a unit on the human body, beginning with the organ system. In the past, this had always been a particularly difficult unit and one that students struggled with on the TAKS. After pulling the print material for the unit, Ms. Price began reviewing the various lessons and activities she could use with the class.

Ms. Price began with the Unit Challenge to help her students explore the big picture themes. She divided her class into teams of 4 and distributed the unit challenge worksheet. She asked the students to think about what their body was doing right now (breathing, digesting breakfast, pumping blood) and to discuss some examples of how two or more organ systems in their body may work together to perform a function. Each team recorded their thoughts and shared them with the class. Ms. Price noticed Miguel participating in his group and that he volunteered to share his group's response.

The next day when students came to class, Ms. Price had rolled in the purple spotted COW. As students walked in, they questioned what the funny looking piece of equipment was. Some students made jokes about it being a karaoke machine, while others thought it was some sort of hidden video recorder. Every student sat anxiously in their seats, waiting to find out what the colorful machine would do.

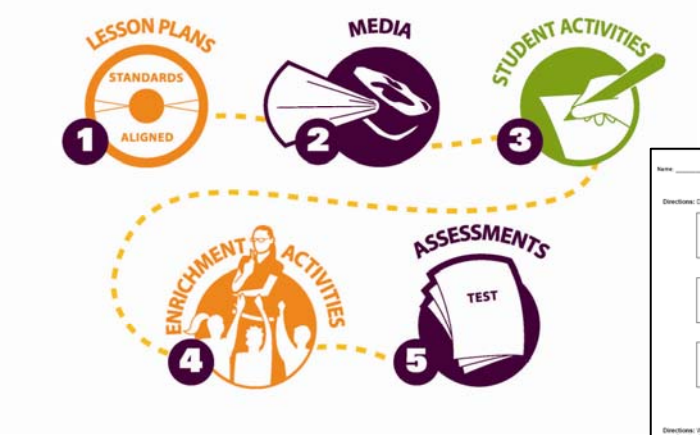
Ms. Price turned on the COW and navigated to the first lesson on the Organ System. It was an animation piece in which Mr. Einstein, the teacher, reviewed the organ systems with students Mike and Drew. The media piece was narrative, but the words and diagrams appeared on the screen as well, reaching audio and visual learners. The students were intrigued by this new tool. Some laughed at the humor, some took notes, and some just listened, but every single student was engaged!

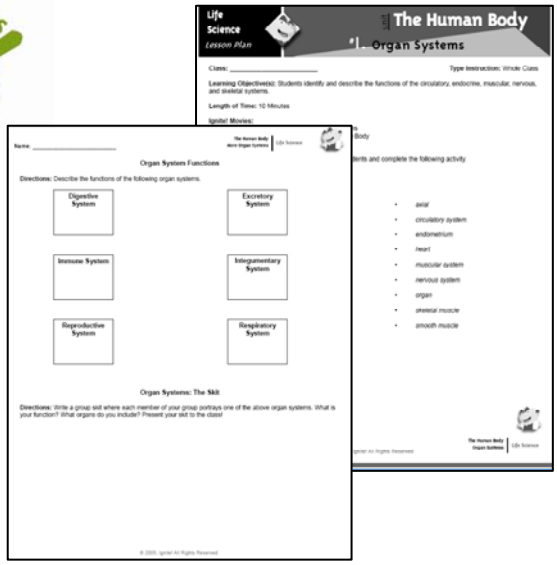




Ms. Price then played the media piece again, but this time, she used the "pause" feature to stop and ask questions, point out key vocabulary words, and direct students to take note of a concept. The class was quiet, listening to the material. Then a hand went up and Ms. Price was surprised to see Miguel had a question. He was comprehending the material and using critical thinking skills to form his own thoughts. Miguel was impressed with himself and as he smiled, a sense of pride washed over his body.

Over the course of the next 6 weeks, students learned more about each organ system using the Ignite! media combined with the print. On the rare days when the COW wasn't in use, students begged Ms. Price to bring it out. At the end of the unit, Ms. Price used the enrichment activity, Reality, Inc. Students received employee manuals and were tasked with solving a problem for their boss. In this project based activity, students "shrunk" down to cell size and did some detective work to find a missing sock in Mortimer Gravitas' organ systems. Ms. Price had never seen her students so excited about science and so motivated to learn.

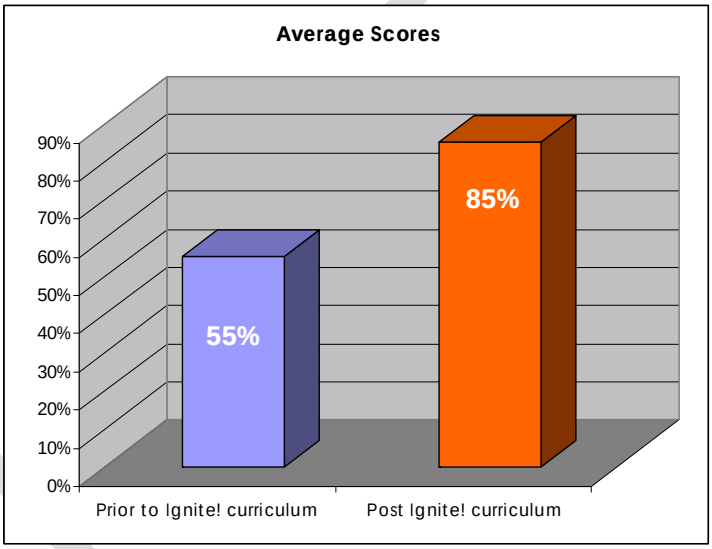




RESULTS

Ms. Price found the curriculum to be a great w ay to introduce a topic, reinforce a topic, and to review a topic. Using the curriculum daily allowed her students to become more engaged in the lessons through the use of words, songs, and interactive media. She also found that Ignite!'s unique writing technique, use of animation and video, and creative presentation of material made the particular subject relevant to the student's daily lives allowing concepts to connect to prior knowledge, and therefore have more applicable meaning. Ms. Price began to see not only higher levels of retention, but a deeper understanding of concepts.

After only 3 months of using the Ignite! Science curriculum, Ms. Price saw a 30% increase in students' benchmark scores. Students came to class requesting the Ignite! curriculum, both motivated and prepared to learn that day's material. Most of all, Ms. Price saw Miguel interested in learning. His absences declined and she noticed that he would come to class with questions about the previous day's material. He was thinking about science beyond the school day and his confidence was growing. He actually liked coming to school!



"I think it really has helped my limited English speakers to see a concept happening.... organ systems, rock cycle, moon phases, erosion, and so on. Teaching is fun again and to see the light shining in my students helps me remember why I became a teacher. I am having an impact!"