



Government, business and education partnership creates new multimedia science and technology lab at an Albuquerque Elementary School...



Fifth grade students working in the science and technology lab at Inez Science and Technology Magnet Elementary School in Albuquerque, NM.

"I've been teaching for 23 years, as a regular first, second and fourth grade class teacher, but this is totally different. The children have been so involved and engaged by it. The program is so well organised and put together that the children are totally independent.

They go and get their trays, they log on to the assignments that guide them through the activities and they do really well. According to some recent science test scores they are learning a lot in this new lab - I love it!"

That's how Mrs. Lucia Mancha, the teacher in charge of the new ScanTEK science and technology program at Inez Science and Technology Magnet Elementary School in Albuquerque, NM excitedly introduced us to her lab.

The new ScanTEK Lab and the teacher are funded by the Sandia Cluster Math, Science, and Technology Grant. This was provided by the Math/Science/Technology Partnership, (which includes Sandia National Labs, Lockheed-Martin, Los Alamos National Labs and the Department of Energy.

They have been running the program at Inez since August 2002 and according to Mrs. Mancha the youngsters are just crazy about ScanTEK Lab. "If they have a field trip and miss out on a session, they come back to see if they can make up the time, even the teachers love it and don't like to miss out on their ScanTEK sessions.



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According to Mrs. Jeanne Forrester, the Grant Project Manager, a ripple effect has been created by the implementation of this first lab in the Albuquerque Public School District. Fifth grade students are moving on to middle schools, expecting to find such current, hands-on technological science experiences. The middle schools are working quickly to be able to supply that. Students and parents and teachers from other schools often visit Inez and leave with the question "Will MY school be getting a lab soon?"

We asked Mrs. Mancha why she felt the new Science program was such a success:

"I love the way it's structured, everything is so well thought out. The children soon learn to use it independently as they work through the tutorials that guide them, they really love the little green alien that guides them through all the activities. Sometimes when they work on the Living with Technology modules that don't have Lenia the alien, they ask me where she is and when can they get her back to help them.



"The hands-on activities are so important."

The hands-on activities are so important, particularly for the fifth graders, they don't realize this, but as you watch them building things using the SciTEK kits, or doing the experiments with the kits like the electricity kit or the Living with Technology modules, they are really engaged. They love the hands-on parts especially the SciTEK challenges, they have made some awesome bridges this semester."

One of the other great things about the program is the vocabulary it uses, they are always talking about things like "gravity" or "friction". With the little ones, I start with gravity and we roll things down the ramps and see how gravity works. It's good to explore them to some scientific terms and they think they are so big when they go round using terms like "gravity".

Some of the answers we hear when we ask the children about science are really cute, one third grader told me about energy, "that's what my mom runs out off when she chases me around the house". For me that's great because now I can introduce the ideas of human energy and mechanical energy and we have some great discussion sessions.

The work that they do in the ScanTEK lab is starting to have an impact in other classes. One teacher did a unit on the solar system recently, all of her class had done the Living with Science solar system assignments. She said it was so easy to teach them because they understood so much about it.

Another nice thing about the work is that it is so inclusive, the girls get really involved, in fact more involved than the boys do in some of the practical activities. It's great to see them so motivated by science, we need to build on that so that as they get older they still want to be involved in science.

I like the co-operative learning style, it did take a while to get the students used to it, particularly the second graders. They needed the most help with the independent learning style at first. Now that they have used it for a while they all get on well, you have to be careful how you pair them up and you have to make sure they all get a go on the computer.



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This is only the first year we have run the program, by the time they reach the third and fourth grades they will be real Science Wizards."

The ScanTEK LAB has the benefit of computer managed learning system, called ClassAct.



This runs over the computer network and is used to track and manage all the Living with Science activities. Student's log-on to the system at the start of each lesson and it automatically delivers their next lesson to their computer screen. We asked Mrs Mancha how her students responded to this new way of learning:

"They like the instant grading, they get really excited when they see how well they have done on an activity. One of the things I like about this program, as a teacher is that I can actually monitor the students as they are working, right from the management system. You click on the exact computer that they are at and you can see the questions that they have already answered, and the answers that they have given and I can communicate with them directly.

"One of the things I like about this program, as a teacher is that I can actually monitor the students as they are working, right from the management system."

We asked School Principal, Mr Leon Bartels how he felt the program was helping his students:

"Even if it helps the children just do a little better in the science tests then it will have been really worth it", he commented.

"In fact the fifth grade have just taken the State Terra Nova tests for science and a lot of them said "we've learnt that in the ScanTEK lab" and they answered those questions and they all did really well according to their teachers."

"While we expected students to be excited about the lab and to be fully engaged in the activities, we did not anticipate the level of high motivation we've observed. For example, early on a student approached the teacher and said, "Mrs. Mancha, I only scored a 90% on my assessment. Could you erase that score and let me try for 100?"

Jeanne Forrester, EdD., Grant Project Manager



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The new science program at Inez Science and Technology Magnet School in Albuquerque NM is just one of many successful programs installed and supported by our representatives XCAL - TechLABS.



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