

## Scantek sparks enthusiasm for science and technology at Long Branch Middle School

“On CNN last night, there was a report that showed how today’s first graders will be doing jobs that we haven’t even created yet. That is the power of technology and it’s what this program is all about.”

The industrial technology program at Long Branch Middle School is based on the LJ Create Scantek system. The lab has fourteen different workstations, each one covers a different topic area and each is connected to a networked computer-managed learning system. Technology Teacher, Dr. Douglas Bowker told us more about this program and how it works; “It is my responsibility to positively promote education. To spark the ‘enthusiasm to learn’ within each student. To provide the foundation for insight, knowledge, discernment and wisdom with all students so they become lifelong learners.

### Active learning environment

The system we have in this lab helps me do that by providing an active learning environment where students engage with the practical reality of science and technology. They are able to apply the skills gained in the elementary school and put them to use in this program. It gives an opportunity for them to apply their reading and comprehension skills in a way that engages and excites them. For example, if they want to launch a water powered rocket they need to read and understand the instructions and be able to answer questions about the materials they have been reading.

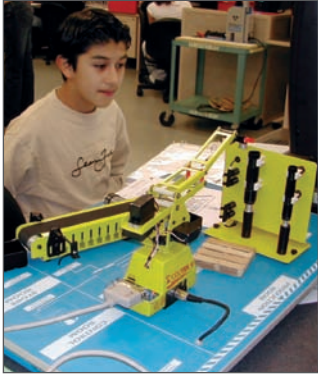
The modules in the lab allow each student to follow an individualized learning program. They can choose a particular area like animation, aerodynamics or space technology and then work in that area. The knowledge and skills they gain can then be put to use in the projects that they all undertake in different animation areas.”



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Dr. Douglas Bowker,  
Technology Instructor

(Science & Computer  
Technology Academy  
Teacher of the Year)



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Mr. Robert A. Celli,  
District Administrator

## Cross curricular impact

The cross curricular impact of the industrial technology program was supported by Administrator/Principal, Mr. Francisco Rodriguez, he told us; “Before we had the Scantek lab, most of our kids thought technology was an iPod. Now they see it from A-Z, they work with gears, test wings in a wind tunnel, control robots, work with digital images, and even create digital videos and animations.

The students really enjoy working in the lab and as you have seen we have science teachers bringing their classroom so they can explore the science and technology connections. Even if they are not using the modules all the time, the knowledge they draw from them helps us infuse technology across the curriculum.

It really supports science and math, we have ‘Connected Math’ here and we have looked at the modules to identify the math connections. The work they do in the lab goes beyond comprehension, if you consider Bloom’s Taxonomy. They are gaining knowledge, comprehending what is being presented and then applying it in a practical way. They are really applying their knowledge and they analyse what they have done and are able to apply the ideas they have to new areas.

## A positive impact on ESL students

The impact on learning has been noticeable; across the curriculum we are even starting to use the Spanish language versions of some of the modules and that is impacting our ESL students very positively.” Mr. Robert A. Celli, District Administrator, commented; “This is the future. It is unbelievable what our students are doing and learning in this lab. This is a fusion of Science, Math and Technology all tied together with reading. We have a great teacher as well and he brings the program together.”

Mr. Joseph M. Ferraina, Superintendent of Schools, stated; “I see this as just the beginning; we are putting the same type of technology into our brand new high school. This is the way of the future; our young people will need these skills in the future in order to acquire jobs. The new high school program will build upon this foundation and they will raise the bar and help create higher level skills in Math, Science and Engineering.”

## The vision is now reality

The Industrial Technology component is providing cross content integrated learning experiences. All subject areas promote scientific inquiry, intense hands-on experimentation, problem solving skills, and applications of concepts to real life situations.

Students are developing a scientific world view by carrying out experiments, collecting and analyzing data, researching, drawing conclusions based on evidence, writing reports, and communicating findings. The students are working in small research teams, becoming producers rather than only receivers of information. Through the process of inquiry and research, the student teams are able to generate theoretical content of the program. Through investigation and experimentation, supported by cooperative learning, technology and integrated writing, our students take an active part in planning and implementing projects that contribute to the community.