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# CATHOLIC SCHOOLS EQUIP STUDENTS WITH SCIENCE AND TECHNOLOGY KNOW-HOW

By Mark Hare

Last year, a student at St. Pius X School in Chili was out of classes for three months because of a health problem. "But every day she was able to Face Time with her teacher," says Principal Steve Oberst. The Apple technology, which can be engaged with an iPad or an iPhone (and other devices), allowed her to see and hear the lessons and to be a part of the class discussion.

"We are never going to replace basic skills such as learning to write a composition with technology," Oberst says. "But learning can be enhanced with technology."

There is a perception in some places that Catholic schools lag in science and technology, says diocesan schools superintendent Anthony Cook, but that's not so. All the diocesan schools are equipped with computer labs, smart boards, and iPads, he says.

More important than the hardware, he says, is helping students become technologically literate. "In most of our schools," Cook says, "students are keyboarding in 2nd grade; some schools use technology with pre-schoolers." The goal is to help students become comfortable with the steady development of new tools, to explore new uses and adapt to the rapid pace of change.

Students often have access to electronic tools and gadgets at home, but in school, they learn how to harness the power of those devices for learning.

Today's smart phones and tablets will be obsolete before today's first-graders reach high school, so it's important that students approach new technology with an open and critical mind, learning to become comfortable with change and how to adapt to those changes.

At St. Joseph School in Auburn, says Prin-



Photo by Mike Crupi/Catholic Courier spoken aloud.

cipal Susan Nedza, students will soon be using iPads and interactive smart boards to improve their Spanish speaking skills. "We have a family from Peru in our school," she says, "and they have helped us connect with a class there." The Peruvian students will use the experience to hone their English skills and the St. Joseph students will practice their Spanish.

New software allows schools more flexibility in meeting individual students' needs. At St. Pius, Oberst says, teachers have used self-directed math programs to provide remedial help for students who need it, and to allow gifted students to reach higher levels. At St. Joseph, Nedza says, computers have made it possible to accommodate students who need to type, rather than write responses by hand, and to assist aural learners who need to have lessons

There's no question that maximizing the use of technology can be expensive, but principals are finding ways to raise the dollars they need. At St. Pius, Oberst says he has used federal Title I funds for technology upgrades every year. "You have to be careful you don't just buy something and expect it to go for 10 years. You have to stay on top of it and make changes every year."

At All Saints School in Corning, Principal Joe Tobia says a generous grant from Corning Inc. allowed the school to add 64 new personal computers and laptops for all teachers. He says future grants will help install smart boards in every classroom (teachers use a pair of portable boards now).

A generous parent at St. Joseph's in Auburn Continued on page 4





HOLY CROSS, ROCHESTER

## CATHOLIC SCHOOLS ARE OFF AND RUNNING!



St. Rita, Webster



St. Kateri, Rochester



St. John Neumann, Rochester



St. Joseph, Auburn



St. Joseph, Penfield



St. Mary Our Mother, Horseheads



SIENA CATHOLIC ACADEMY, BRIGHTON



ST. AGNES, AVON, 9/11 Remembrance Day



HOLY FAMILY, ELMIRA



St. Lawrence, Greece



HOLY FAMILY, ELMIRA, Riverwalk Field Trip

#### SCIENCE AND TECHNOLOGY

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came forward to help equip a lab that is helping 8th grade science teacher Ethan Brown prepare his students for the Earth Science Regents exam before they enter high school.

In addition, Brown has used iPads to help students do virtual labs and even virtual dissections — a good way, and an economical way, to ready them for actual dissections as part of their study of biology.

And when it's time for dissection, Nedza says, "We put our Catholic identity first. Because of our respect for life we had to find a lab that doesn't raise pigs to be killed. We were able to find a company that only sells pigs that have died of natural causes."

At Seton Catholic in Brighton, practical lessons in science and technology start early. Principal Linda Moll says even first-graders are doing Power Point presentations and 6th-graders have to use their skills with Adobe Photoshop and other programs to produce a half-page display in the yearbook.

Moll credits Dr. Diane Herrick, a parent and a nuclear physicist who joined the staff this year as a lab technician, with creating multiple opportunities for students to "do" science and technology, not just to learn about it.

In grades three through six, Moll says, "students are learning how to write labs, collect evidence, measure it and show their findings in charts."

With Herrick's guidance, she says, students are learning to explore the world. "They are learning how to make observations," she says. But they are having fun at the same time — using microscopes examining everything from Play-Doh to gummy bears.

Doing the work of science doesn't always require state-of-the-art equipment, says Donald Mills, principal of Immaculate Conception School in Ithaca and a former high school science teacher.

For example, he says, with help from a SUNY Oswego technology education student,



## From the Superintendent's Desk

#### DEAR CATHOLIC SCHOOL FAMILIES,

We have welcomed the new 2014-15 school year with opening Masses, prayer services and Curriculum Nights. I am delighted to see such excitement and focus evidenced by our students, families, teachers and administrators. We have vibrant communities of strong faith, expanding knowledge, and authentic service.

We continue on our journey to strive for continued excellence in our schools for all students and have been working on that in many ways. Beginning in the Spring 2014, teachers across the Diocese began the fantastic task of writing curriculum guides



across all grade levels. It has been an exciting time for our teachers to connect with other teachers throughout the 12 counties that comprise the Diocese of Rochester. Throughout this year, teachers across the Diocese will review and refine these curriculum guides.

You have witnessed first-hand that each school offers children a safe and caring place where they can learn and grow. We teach the whole child – spiritually, socially, and academically. Catholic school teachers put children first, recognizing their strengths and supporting their growth as people of God.

As I have emphasized before, you, our families, serve as our greatest asset in each of our Catholic school communities. Please share your meaningful and life-changing experiences with others. On November 5<sup>th</sup> and 6<sup>th</sup>, all of our Catholic schools will be hosting a diocesan-wide open house. We urge you to bring a close friend or family member to visit your school. We thank you for your enthusiasm and willingness to share the treasure of our Catholic schools.

May God continue to bless all of our Catholic School families throughout the new school year!

Anthony S. Cook III Superintendent of Catholic Schools Director of Faith Development Ministry

5th- and 6th-graders learned some principles of bridge design — using a paper structure to test for stability, measure sway and determine how much weight a bridge can carry.

Science and technology education are "not solo sports anymore," Mills says. "The learning is collaborative, like building the bridge." And today's teaching doesn't start with textbook answers, it starts with problems that students must work together to solve, using all the tools, including Internet resources, at their disposal.

All students today are "digital natives," says Susan Nedza. They were all born after the explosion of digital technology and they use that technology almost intuitively. In some ways, she says, they are ahead of the adults, but they need adults to help them answer the ethical questions technology raises.

Catholic schools have a huge advantage in this area, she says. "We work with our students on cyber-safety, helping them understand what they should share and what they should not share online. Digitally, you are still a Catholic, so what should we put out there? Who is our neighbor online and what has Jesus taught us about our responsibility to our neighbor?"

## **OPEN HOUSE**

### Wednesday, Nov. 5 & Thursday, Nov. 6

All diocesan schools will hold open houses on these days with extended hours and tours. Please tell your friends and neighbors to come and visit the nearest Catholic school.

For more information, please visit our website at www.dorschools.org or call (585) 328-3210

