

John Paul II Catholic
Secondary School

Customer Success Story

AutoCAD®
Autodesk® AliasStudio™
Autodesk® Inventor®
Autodesk® ImageStudio
AutoCAD® Architecture
Autodesk® VIZ

My biggest thrill is to see students making it in the professional world. One is a head designer with a motorcycle manufacturer, another went into fashion design, and many others have become successful architects. And it all started here.

—Mike Santolupo
Instructor
John Paul II Catholic
Secondary School

Sparking imaginations.

Autodesk® software motivates students to develop innovative designs and pursue careers in engineering.



12th Grade School Classroom Project

At John Paul II Catholic Secondary School in Ontario, Canada, you do not have to be an engineer or architect to use design software to create amazing things. You can be a high-school student. For 17 years, Mike Santolupo, an instructor at John Paul, has been teaching design courses to students as young as 13. How do the kids experience their ideas? With Autodesk software. Using Autodesk software products like Autodesk® Inventor®, AutoCAD® Architecture, and software from the Autodesk® AliasStudio™ product line, students create innovative designs for a wide range of projects—from “green” houses and solar cars to LED light fixtures and audio speakers. With Autodesk software, John Paul students have been able to:

- Master the fundamentals of drafting and design—easily and enjoyably
- Create original designs using an all-digital workflow
- Demonstrate that young people can learn sophisticated design tasks
- Launch successful careers in engineering and architecture

Autodesk®

The solution for John Paul's technical design program had to be affordable and intuitive.

The Challenge

Motivate Students

A former CAD designer at General Motors, Mike Santolupo started teaching design technology 17 years ago. Steeped in industry, Santolupo knew that by teaching his students computer-aided design (CAD) technology, he would be giving them a leg up if they decided to pursue a career in engineering. He also knew that to complete inspiring projects quickly, his students needed powerful and easy-to-use software tools. And to fit the school's limited budget, the software had to be affordable.

Affordable, Intuitive Teaching Tools

"Back in 1991, you had to pay \$10,000 per workstation for some CAD products," says Santolupo. "I wanted to teach students CAD, but there was no way we could pay that kind of money. It was also very important to me that whatever software we used be intuitive enough for children as young as 13 to learn within a few days."

The Solution

Santolupo's search didn't take long. "AutoCAD was the best product, and it was inexpensive compared to other design software available at the time," he says. "It's also very easy for students of high-school age to learn. Once they get the fundamentals down, they are off and running on more complex drawings and tasks."

Learn 2D and 3D Design

Although 2D AutoCAD® software was very successful in Santolupo's design courses, his students also wanted to design with the latest technology, in an environment that mirrored the real world and their imaginations. Santolupo was thrilled when 3D software became readily available. "My students drove the move to 3D," he says. "They wanted to be able to do 3D modeling. Before long, Autodesk Inventor and Autodesk AliasStudio became our new standards."

Using a range of Autodesk software poses no problem for John Paul students. "I like that when students use AutoCAD, moving to AutoCAD Architecture is no problem—they already know the interface," explains Santolupo. "Even I was a little surprised by how easy it is for students to jump seamlessly from program to program," he continues. "I'm constantly amazed by what these kids are capable of doing—they use complex features of the different applications to produce outstanding designs."



11th Grade Desk Organizer Project. Autodesk Inventor rendering and photo of final manufactured work.

Autodesk software makes it easy for me to see my designs come to life. It has helped inspire me to study industrial design—so I can do something I love for a living.

—Jeff Burger
Student
John Paul II Catholic
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Use Digital Workflows

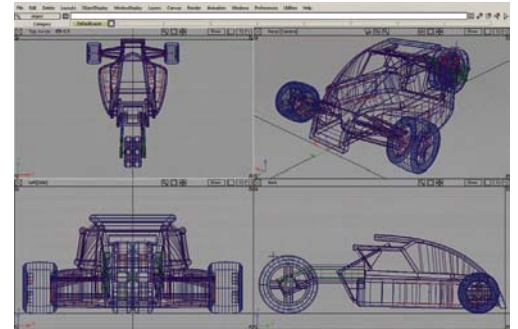
All of Santolupo's courses are project-based and each requires students to use Autodesk software—the specific application depends on the type of project. For a recent assignment, his 11th graders are designing one-foot-long solar cars using several Autodesk software applications in an all-digital workflow. "They're using Autodesk Inventor and AliasStudio," says Santolupo. "I'm giving the students the solar panel, bearings, and the motor, and they have to design and fabricate the rest. When they are finished, we'll take them outside and race them—no matter how cold it is outside!"

Once they have created a digital model, students often move the model back and forth between software applications. "Digital Prototyping is core to what we're doing here," says Santolupo. "When they want to produce scale drawings with dimensions or do sheet metal work, students use Inventor. When they want to handle curves or surfaces, they move to AliasStudio."

In a truly digital workflow, students are using products from the Autodesk® AliasStudio™ product line to conceptualize their solar cars and Autodesk® Inventor® software to do the engineering. "We bring their AliasStudio drawing file into Inventor to prepare the designs for fabrication," explains Santolupo. "Then we actually fabricate the frame and body in our manufacturing room." Students take the DWG™ file created in Inventor to the manufacturing lab and load it into a computer numerical control (CNC) program to fabricate their designs.

Visualize Your Designs

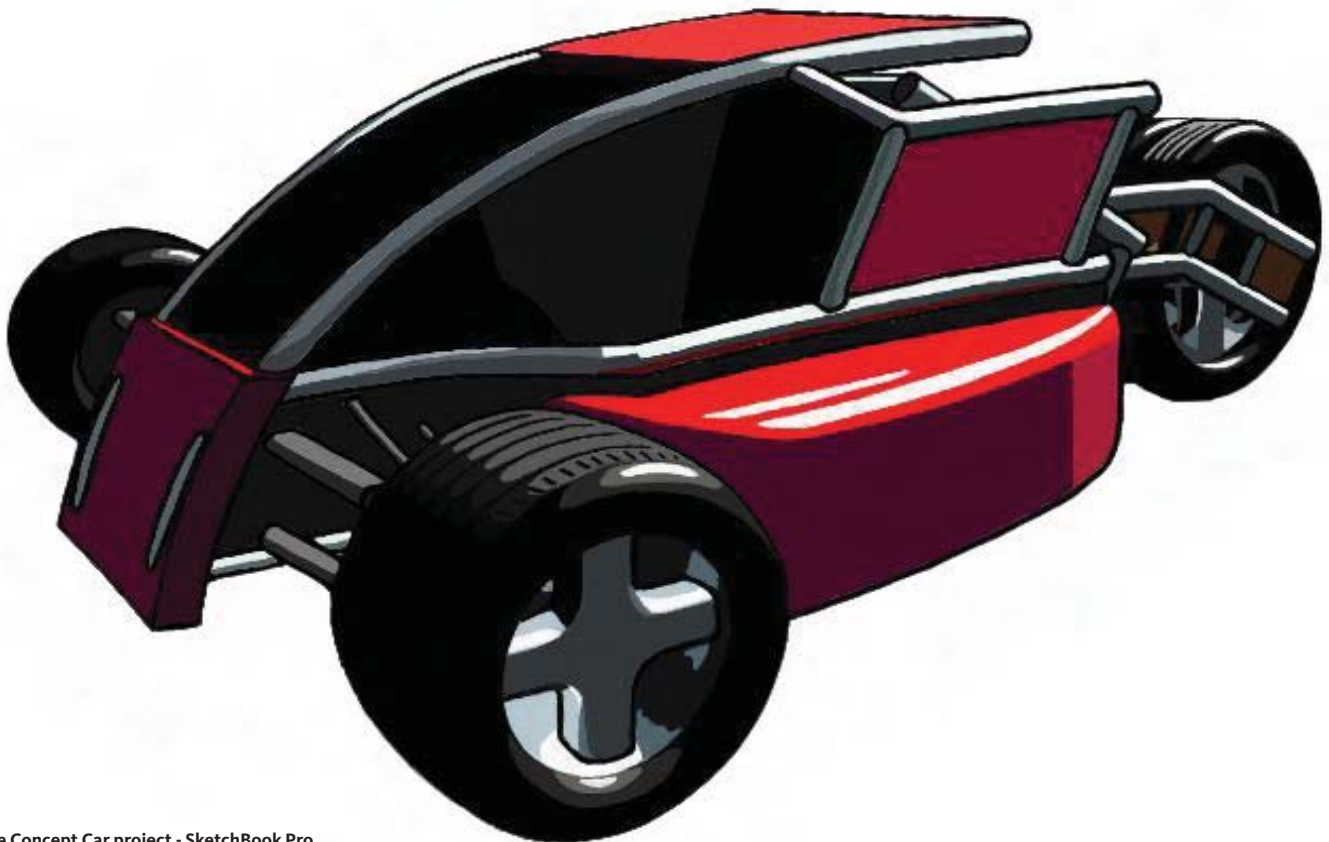
To Santolupo's students, one of the most exciting parts of any project is seeing their designs brought to life. Depending on the project, students use Autodesk® ImageStudio, Autodesk® VIZ, or Autodesk® Inventor® software to produce renderings. "Seeing their finished designs in beautifully rendered 3D is the highlight of every project, every time," says Santolupo.



Concept Car Project - Autodesk AliasStudio



Concept Car Project - Autodesk ImageStudio



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The Result

Inspiring Projects

The result of John Paul's technical design program is clear—students are inspired to create and innovate. “Kids from other schools come to our pre-engineering classes,” says Santolupo. “They recognize we offer a unique experience—one that should be offered by more schools.”

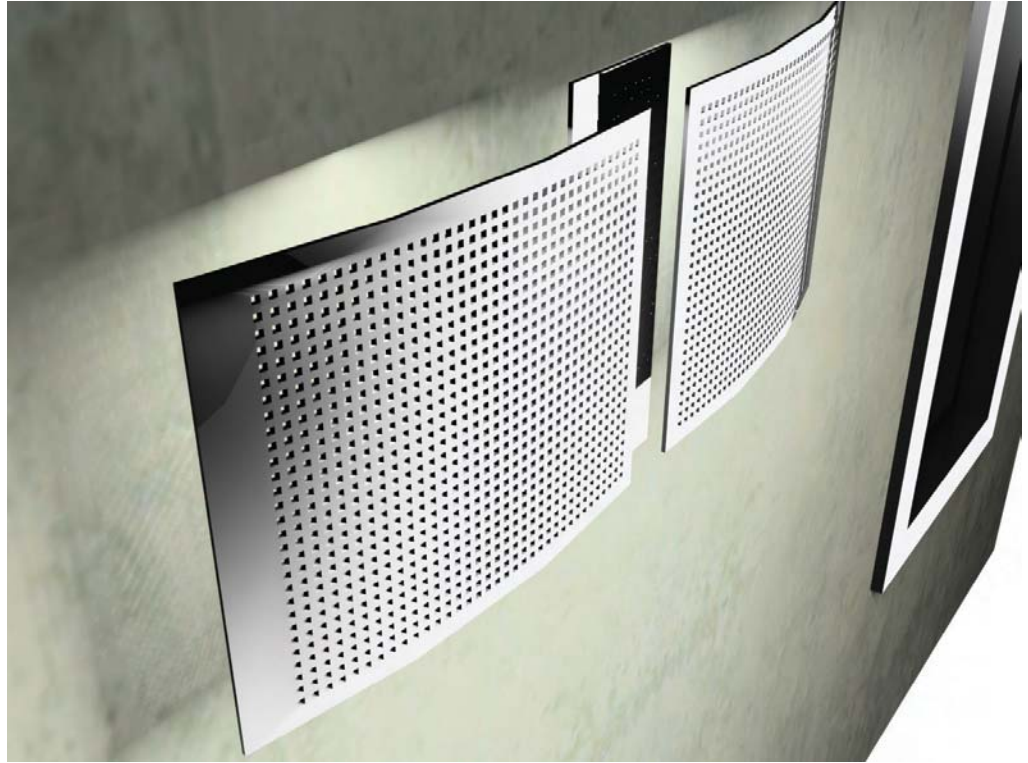
Serious Learning

With exciting projects underpinning serious learning, students are often inspired to pursue careers in design and engineering. “My biggest thrill is to see students making it in the professional world,” says Santolupo. “One is a head designer with a motorcycle manufacturer, another went into fashion design, and many others have become successful architects. And it all started here.”

Budding Designers

Justin Chapman, a John Paul student, credits Autodesk software with helping him set his goals for the future. “Applications such as Autodesk Inventor let me explore all areas of design, translating my ideas into reality without limitations,” he says. “I’m motivated to pursue a career in engineering.”

Adds Jeff Burger, another John Paul student, “Autodesk software makes it easy for me to see my designs come to life. It has helped inspire me to study industrial design—so I can do something I love for a living.”



12th Grade Green Design LED Light Fixture Project

Learn More

Find out how you can use Autodesk software to spark the imagination of your students at www.autodesk.com.

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