

# Top 10 Reasons Why the PTC DesignQuest Program Sets the Standard for 3D in Schools

Choosing the right 3D design program for your classroom is an important decision. It also can be difficult one. That's because many CAD (computer-aided design) solutions – at first glance – appear to be the same. Yet after doing some homework, you'll discover a number of major differences between programs that set one program apart from the rest. That's the DesignQuest Program from PTC, now being used by the world's best schools and universities – as well as the world's best companies.



## So what really differentiates the PTC DesignQuest Schools Program?

There are dozens of reasons why DesignQuest is the top choice of the best schools. Below you'll find the top 10. Once you have a clear understanding of these differentiators, making this important decision for your school becomes easier than you ever imagined.

### Reason No. 1

#### The Industry's Leading 3D Design Software

PTC's DesignQuest Program features the industry's premier 3D CAD software, Pro/ENGINEER. When you compare the ease, functionality and performance of Pro/ENGINEER to any other 3D CAD solution, you'll see why it's the choice of more than 600,000 professionals, at more than 50,000 of the most successful companies worldwide, such as Toyota, HP, Lockheed Martin, Sony, U.S. Surgical, Caterpillar, Ferrari, and Motorola. For these organizations, only the best design software will do, which is why they standardize on Pro/ENGINEER.

So, what exactly is Pro/ENGINEER? Pro/ENGINEER is a powerful tool that enables educators and students to explore science, math, engineering and technology by creating designs in 3D. Students can model parts and assemblies, test theories, and explore their creativity – while simultaneously developing highly marketable skills that will be valuable no matter what field they ultimately choose.

“Before I became a teacher, I worked as a draftsman, where I had chance to evaluate several CAD programs. So I knew that I wanted to use Pro/ENGINEER in the classroom. The software is easy to use, and PTC has been great about providing all of the support that I need to use the program in my classroom.”

–9th Grade CAD Teacher

## Reason No. 2

### Curriculum that's Relevant, Current and Exciting!

Providing teachers with an established curriculum is not a 'differentiator' for 3D CAD student programs. However, the quality of that curriculum, and how it supports each teacher, is a definite differentiator. At PTC, we're continually working with teachers and educational organizations to build highly effective tutorials and classroom materials. While other programs include outdated or complex industry-based training materials; PTC's project-based activities are designed with students in mind. Consequently each tutorial features inspiring, totally relevant information.

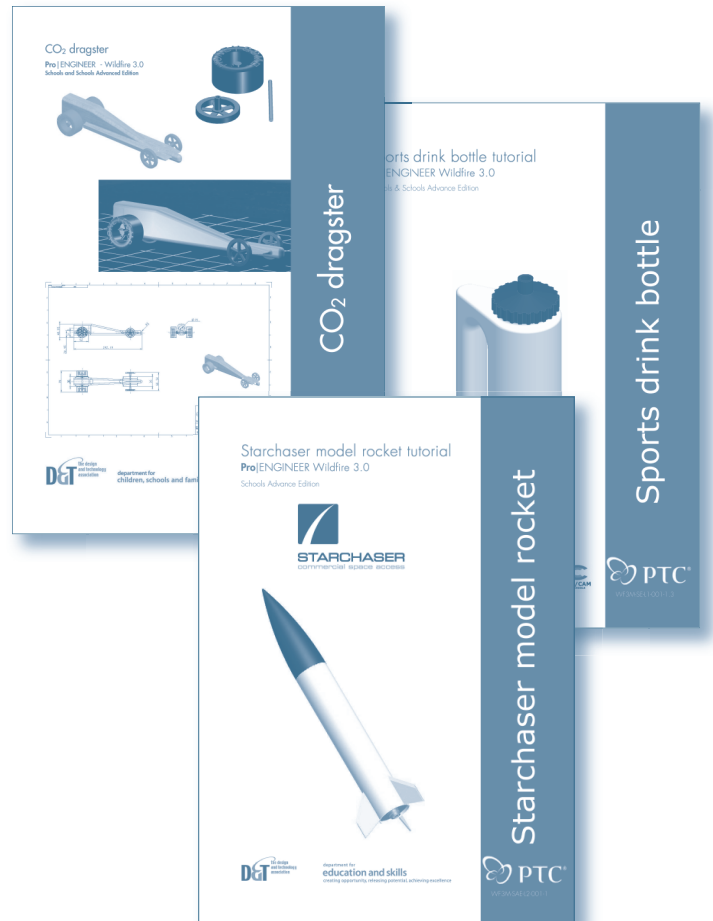
From our partnership with educators on all levels, we know that teachers have busy schedules, and the last thing you need is a program that requires a lot of time and effort to introduce into a classroom. That's why DesignQuest is a 'turnkey' program—containing everything you need to be successful 'right out of the box'. Our program provides:

- Modular tutorials for the classroom, each one being highly flexible to accommodate teachers' busy schedules.
- Teacher lesson plans with complete learning objectives, a weekly activity calendar, and homework tasks.
- Student workbooks with learning objectives, tasks with picture guidance and homework assignments.
- Student Certification and Assessment.
- A comprehensive curriculum, accessed via an easy-to-use Web interface, and can be used online or printed for offline use.
- Both teachers and students have access to training through PTC's educational COACH Learning Management System (Web portal).

## Reason No. 3

### Curriculum Mapped to National and International Standards

No doubt, providing teachers with classroom material is important, and most 3D design programs offer materials of varying value. PTC, however, sets a higher standard by actually mapping each element of our curriculum to national and international standards. We understand that teachers must precisely follow standards and initiatives, such as STEM (Science, Technology, Engineering and Math). Our curriculum maps, included with the DesignQuest Program, clearly illustrate how each part of the program links to standards... so you know that what you're teaching is exactly what's mandated.



“PTC and ITEA have partnered on implementing a comprehensive design and global engineering initiative. Each component – ITEA’s ‘Engineering by Design’ and PTC’s Design and Global Engineering Initiative, are complementary and aligned on addressing technology and engineering education throughout a student’s education.”

– Dr. Kendall N. Starkweather  
Executive Director, ITEA

## Reason No. 4

### Global Engineering – Available Only with DesignQuest

Times have changed in global manufacturing—radically! Because of global outsourcing, the days of professional engineering teams designing ‘shoulder-to-shoulder’—working on 3D designs in isolation—are officially over. Likewise, the days of student engineers designing alone in isolated classrooms are also ancient history. To ensure their success in the real world, it is imperative that we teach future engineers to design and build next-generation products in cooperation with other engineers who don’t just live across campus, but across states and nations.

Today, PTC is the only company that offers the “Global Engineering” initiative for education. We couple Pro/ENGINEER with our global engineering solution—Windchill ProjectLink—a project-based collaboration tool that students access through the Internet. Working within Windchill ProjectLink’s virtual workspace, teams of student designers – situated anywhere in the world – can access up-to-the minute data pertaining to their project.

Windchill offers powerful tools for storing, managing and sharing 3D design and project data, while also providing discussion forums and real-time meeting capabilities. Team members can exchange ideas, build off each other’s input, and capture innovative ideas as they evolve in real-time. Plus, through our partnerships with businesses and government, we offer students the opportunity to collaborate on “real-world” design challenges with ‘real-world’ professionals. No other program in the industry offers these additional tools for students, teachers and schools.

## Reason No. 5

### Affordable: Low-Cost or No Cost – Pick One

Teachers that decide to bring Pro/ENGINEER into their classroom have two options: Pro/ENGINEER Schools Edition, available at no-cost, or Pro/ENGINEER Schools Advanced Edition, available for a very minimal cost.

Teachers that choose the no-cost Pro/ENGINEER Schools Edition are required to attend an introductory workshop to be certified on Pro/ENGINEER software. Once the teacher has completed the course, PTC donates up to 300 licenses of the Pro/ENGINEER Schools Edition to their middle and/or high school! Unlike those of other programs, these licenses are NOT trial licenses that terminate after 120 days; they are perpetual licenses... so they never expire! In addition, each school involved in our program will receive product updates when new releases of Pro/ENGINEER become available.

PTC’s Pro/ENGINEER Schools Advanced Edition is available for a minimal cost because it includes an additional 25 design modules, covering the entire design-through-manufacturing process. Teachers choosing this edition are not required to complete an introductory workshop; instead, they receive enhanced technical support and additional training opportunities, including access to Web-based distance learning classes. Pro/ENGINEER Schools Advance Edition is a two-year license offered with a low-cost, per-seat fee.



“I think high school students need to be exposed to what industry is doing because whether they go on to college or not, a lot of them will be going into industry to work. We need to give our students opportunities that mirror what they’ll most likely see in the real world. They need to be on top of the technology curve so they aren’t left behind.”

– 10th Grade Technology Teacher

## Reason No. 6

### Students Can Bring Pro/ENGINEER Home

In our experience working with thousands of students, teachers and schools worldwide, PTC’s education group quickly discovered that students often want to explore 3D design on their own. That’s why, with our DesignQuest program, PTC donates up to 300 licenses of our software not only for use in the classroom, but also for students to install at home. That means students can work on classroom projects at home, and have fun exploring this exciting technology in greater depth by creating new designs on their own time.

## Reason No. 7

### Appropriate for All Students – on All Levels

The DesignQuest Program is carefully architected to provide a rewarding educational experience for all students – not just the “top 10%”. Our philosophy is that all students should have an opportunity to explore 3D design and engineering. Consequently, the DesignQuest program is a ‘scalable’ program that begins by teaching the basics of engineering and 3D design, as well as solving design problems through project activities. This approach allows students, at any level, to gain valuable experience, and gives them the freedom to work to their individual potential. Teachers can let students work on projects at home, where they can use the online curriculum either to gain a better understanding of the material, or to move into more advanced lessons on their own. Teachers can be assured that all students will benefit by learning how to problem-solve and think logically.

## Reason No. 8

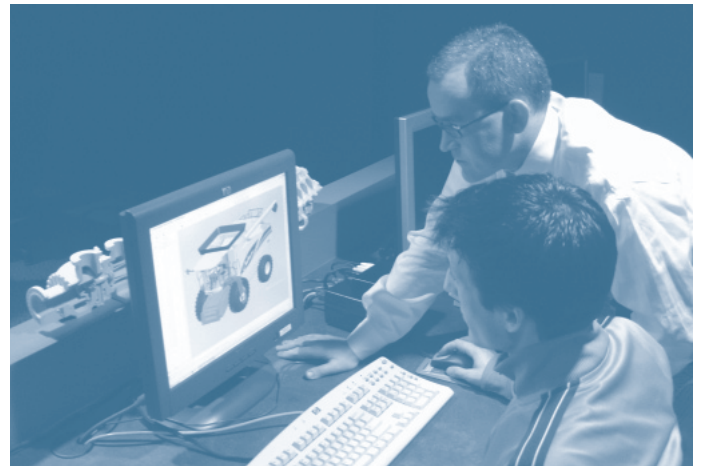
### **Scalable: Start in Secondary School, Grow into the Workplace**

The DesignQuest program is simple enough to be implemented into a Middle School classroom, even though it includes the same functionality and graphical interface used by top designers and engineers in leading companies around the world. Students have an opportunity to learn the basics of these powerful design tools at an early age, then expand upon that knowledge as they move into a college/university setting, and eventually into their careers. Students never have to learn a different interface or application once they move into their professional positions, because all the software that PTC provides to secondary schools is the same software being taught at colleges and universities, as well as the same tools we offer to industry. PTC's software can be used by students to design something as simple as a sports water bottle, and by professionals to build something as complex as an jumbo jet (yes... the entire structure!).

## Reason No. 9

### **Competitive Advantage: Students with PTC Skills Highly Valued**

PTC customers are some of the most successful companies across every industry, including Aerospace, Defense, Automotive, High Tech, Electronics, Industrial Equipment, Life Sciences, Government and Retail. Over 50,000 businesses rely on PTC software to develop innovative products, which means as these industry grow, the demand for workers having PTC skills will continue to expand. Today, students that have experience using Pro/ENGINEER, Windchill and Mathcad have a competitive edge when pursuing careers after graduating from high school and college. Our customers have expressed a need for experienced engineers and designers – and with the DesignQuest Program, we are helping schools prepare students to fulfill that increasing demand.



## Reason No. 10

### **Fulfilling Our Purpose: Why PTC is Committed to Education**

PTC entered the education market as a way to give back to the community by donating our software to schools in order to build a pipeline of future engineers. Across the globe, there's a dire need for schools and colleges both to inspire students to develop a passion for technology, and to graduate the next generation of engineers who can bring innovative ideas to life. Unlike other 3D CAD programs, DesignQuest is philanthropic, such that it gives every teacher and student an opportunity to participate without compromising their school's budget. The mission of the PTC Global Education Program is to ensure students in every school district – everywhere – have a chance to use the best technology tools available, because the outlook of our global economy, our customers, and PTC rests upon their success in the future. Building the pipeline for educated and experienced engineers is our way to help our customers be successful in a highly competitive world. With better decision-making, analytical, and collaborative skills, DesignQuest students will be better prepared to make an immediate, positive contribution, regardless of which professional field they choose.

### **Ready to Learn More?**

As a committed professional, you want your students to have the best available tools – those used by the world's best companies – which makes DesignQuest the optimal 3D design program for any school.

To learn more about the DesignQuest Schools Program, please visit us on the Web at [www.ptc.com/go/education](http://www.ptc.com/go/education) or e-mail [schools@ptc.com](mailto:schools@ptc.com)