AUTODESK **UNIVERSITY** 2014

Design Programs for Secondary Education

Lynn Austin – Autodesk
Dr. Andrea Croslyn – Project Lead The Way
Nelson Vale – F1 in Schools
Dan Banach – Autodesk
John Helfen - Autodesk

ED7359 This session will highlight several exciting Autodesk partnership programs available to educators to inspire students to participate in design based learning, projects and competitions across science, coding and engineering. You will learn how our partnerships with Project Lead The Way and F1 in Schools engage students in developing the skills necessary for achieving academic and future career success.

Learning Objectives

In this class, you will:

- Learn about Autodesk's strategic partnerships with secondary education programs available to educators
- Learn about Project Lead The Way and F1 in School programs, and the impact of our partnership
- Understand how to leverage these programs for your classroom
- Hear about the future direction of these programs

About the Speakers

Lynn Austin, Autodesk, Business Development Manager -Education

Lynn combines her passion for education with more than 18 years of business development and strategic partnership management experience. She develops and manages strategic, global education partnerships with 501(c)3 and for-profit organizations to drive design-learning opportunities in/out of the classroom. Prior to Autodesk, she served nearly 9 years as Director of Strategic Partnerships and Engagement at New Hampshire Public Television, NH's only PBS Television station, where she created and led award-winning, multi-platform community engagement and K-16 Knowledge Network initiatives. Previous to NHPTV, Austin served as a FRC Regional Manager for FIRST (For Inspiration and Recognition of Science and Technology), a non-profit organization founded by renowned inventor Dean Kamen. *lynn.austin@autodesk.com*

Dan Banach, Autodesk, Program Manager - Education

Dan is an Inventor Certified Professional, an Inventor Certified Instructor, an Autodesk Certification Evaluator, a nationally recognized instructor, and a longtime speaker at Autodesk University and many education events. Before joining Autodesk, Dan worked at an Autodesk Reseller, where he provided CAD Solutions and training to clients for over 19 years. He has authored 3 books on Autodesk Mechanical Desktop and has co-authored 17 books on Inventor software. Dan has also created Inventor software and Inventor Publisher software computer-based training courses, and he has 2 Inventor eBooks at Apple Inc.'s Apple Store. *dan.banach@autodesk.com*

Andrea Croslyn, Project Lead The Way, Chief Operating Officer

Dr. Andrea Croslyn is the Executive Vice President and Chief Operating Officer at Project Lead The Way, where she oversees key organizational functions including supply chain, school and technical support, and business processes and metrics. As a chemist and Six Sigma Master Black Belt, Croslyn understands STEM education, organizational design, quality processes, and team building. She previously served as the Process Excellence Manager for Global Technology and Innovation at SABIC, one of the world's leading manufacturers of chemicals, fertilizers, plastics, and metals. Prior to SABIC, she was a technology process excellence leader, an e-Engineering leader, and an analytical chemist at General Electric in their plastics business. However, it was her passion for helping schools to improve student achievement in math and science that earned her the prestigious national Jefferson Award for Public Service. Her efforts resulted in over 15,000 instances of children being impacted in a six-year period. Croslyn also led a SABIC program aimed at elevating student engagement in schools. Croslyn earned a PhD in analytical chemistry with a minor in environmental engineering from the University of Florida and BS degrees in chemistry and Russian from the University of the South. *acroslyn@pltw.org*

John Helfen, Autodesk, Partner Strategy Manager – Education

John is part of the global secondary education team and works with students and educators to introduce technology into the classroom. John is also a certified professional in Autodesk Inventor, a Autodesk Certified Evaluator for Autodesk Inventor, and an author for lynda.com.
john.helfen@autodesk.com

Nelson Vale, CITEVE, Project Manager

Nelson is the In-Country Coordinator for the F1 in Schools program in Portugal. F1 in Schools is the only global multi-disciplinary challenge in which teams of students aged 9 to 19 deploy CAD/CAM software to collaborate, design, analyze, manufacture, test, and then race miniature compressed air-powered balsa wood F1 cars. The challenge inspires students to use IT to learn about physics, aerodynamics, design, manufacture, branding, graphics, sponsorship, marketing, leadership/ teamwork, media skills and financial strategy, and apply them in a practical, imaginative, competitive and exciting way. Vale is also the project manager of "Think Industry" a project that aims to motivate young people of primary and secondary schools in Portugal to learn technology and Innovation. In the Last 6 years the project reached over 100.000 students. Nelson is now preparing an interactive learning facility to teach students about textile technologies. *nvale@citeve.pt*

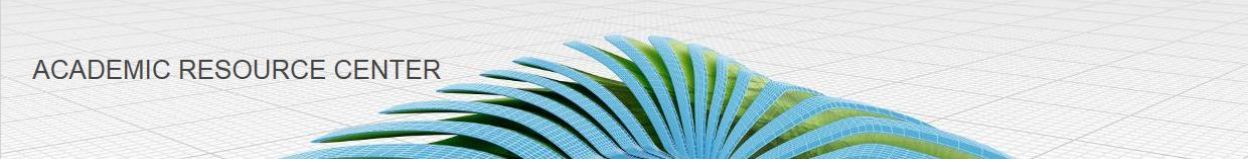
This handout provides links to Autodesk education and partner resources that will be highlighted in class.

Autodesk & Education

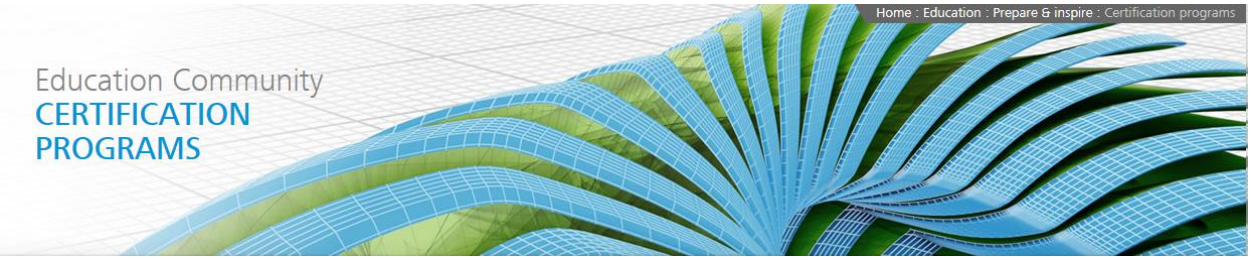
Click the links to view the websites.

Autodesk Education Community

Autodesk Academic Resource Center



Autodesk Training & Certification Programs



Highlight: High School Freshmen Get Certified

Each year, 1,400 freshmen at Brooklyn Technical High School take the Inventor Certified User exam to build industry-recognized credentials.

Watch Video: Brooklyn Technical High School video

Autodesk - Design the Future

Secondary School Registration: USA

Watch Video: President Obama discusses #ConnectED initiative and how Autodesk and other tech and telecom leaders are helping to bring classrooms into the 21st century

Education Partnerships

Global Secondary Education Partnerships:

www.autodesk.com/f1inschools

www.f1inschools.com

F1 in Schools competition inspires future designers!
F1 in Schools participants design and manufacture a C02 powered car, analyze aerodynamics, and create marketing material. Regional, national, and international teams are judged on car speed, design documentation, verbal presentation, and marketing display. Autodesk is the Premium Global Software Partner, providing free tools for the next generation of design. Through F1 in Schools, schools are provided software to support their teams through the competition season.

www.autodesk.com/wsi

www.worldskills.org

WorldSkills International (WSI) is a global not-for-profit organization that aims to support national agencies in the promotion of vocational education through competitions, often referred to as the Skills Olympics. Autodesk, Inc., is a global partner of WSI, and Autodesk technology is used in a number of competitions covering manufacturing; architecture, engineering, and construction; and media and entertainment.

www.autodesk.com/coderdojo

www.coderdojo.com

CoderDojo is a volunteer led global movement oriented around running free coding clubs (Dojos) for young people. At a Dojo, kids 9-19 learn how to code, develop websites, apps, programs, games and much more. There are more than 450 Dojos (clubs) across 47 countries (and counting!). Dojos are set up, run, and led by mentors/volunteers at schools and offsite community or business locations. CoderDojo makes learning to code a fun, sociable and awesome experience! As an education software partner, Autodesk provides dojos around the world with access to our 3D design tools and learning content to encourage students to expand/enhance their Design Thinking skills. Autodesk has created fun and challenging design projects for dojo students to earn Autodesk CoderDojo Badges!

www.autodesk.com/vex
www.vexrobotics.com
www.roboticseducation.org

VEX Robotics provides a fun way for students to learn core subjects through robotics. Software from Autodesk supports this project-based learning approach in the classroom and out of the classroom in VEX Robotics Competition held around the world. VEX offers robotics competition categories for high school VEX teams, as well as college/university VEX teams.

North America Secondary Education Partnerships:

www.autodesk.com/education/learn-and-teach/teach/pltw/all-products

www.pltw.org

Project Lead The Way (PLTW) is a nonprofit organization and the nation's leading provider of science, technology, engineering, and math (STEM) programs. PLTW's world-class, activity-, project-, and problem-based curriculum and high-quality teacher professional development model, combined with an engaged network of educators and corporate partners, help students develop the skills needed to succeed in our global economy. PLTW students apply what they know, identify problems, find unique solutions, and lead their own learning. PLTW integrates Autodesk software into its curricular programs, inspiring and developing the next generation of problem solvers, critical thinkers, and innovators.

www.autodesk.com/first

www.usfirst.org

FIRST (For Inspiration and Recognition of Science and Technology) Robotics inspires young people to become science and technology leaders by engaging them in exciting extracurricular high school robotics programs. Autodesk design tools help you imagine, design, and create the world around you. Use them to build and test your robot designs virtually before making your first part. Catch errors early to save critical time during the competition season.

www.autodesk.com/4H

www.4-H.org

Autodesk partners with National 4-H Council and the University of Arizona to provide 4-H National Youth Science Day participants with interactive aerospace engineering activities using the latest Autodesk 3D design software and training resources so young people can take their innovation and Design Thinking skills to the next level.

www.skillsusa.org/free-autodesk-software/

Autodesk has been committed to SkillsUSA for over 20 years as a corporate sponsor. SkillsUSA and Autodesk share the common goal of preparing students in STEM-based careers for creating an industry-ready workforce. To further this commitment, Autodesk provides schools, students, educators, and advisors with free access to Autodesk software. Schools can register free through the Autodesk Resource Center (ARC) at: www.autodesk.com/academic. And, students, educators and advisors can register free through the Autodesk Education Community at: www.autodesk.com/education.

www.sciencebuddies.org

The award-winning, non-profit Science Buddies empowers K-12 students, parents, and teachers to quickly and easily find free project ideas and help in all areas of science from physics to food science and music to microbiology. Whether your goal is to find a fun science activity for your kids or win the international science fair, sciencebuddies.org puts comprehensive, scientist-authored tools, tips, and techniques at your fingertips. Whatever you dream of making, the Autodesk-Science Buddies partnership can put you on the right path. Enhance your science project: design in 3D with free Autodesk software!

Postsecondary Education Partnerships:

www.formulastudent.com

Formula Student is a student engineering competition held annually in the UK. Student teams from around the world design, build, test, and race a small-scale formula style racing car. The cars are judged on a number of criteria. It is run by the Institution of Mechanical Engineers and uses the same rules as the original Formula SAE with supplementary regulations. Autodesk is proud to sponsor student projects around the world with free, full-version, industry-recognized Autodesk software and cloud services. to students participating in Formula Student, Formula SAE, Shell Eco-Marathon, or any of the other engineering student competitions. Getting real-world, hands-on experience is vital to developing the skills and knowledge you'll need as you move into your professional life. The ability to "speak" the language of engineering and work as part of a collaborative team are highly valued by employers and innovators in today's competitive, global marketplace.

www.solardecathlon.gov

The U.S. Department of Energy Solar Decathlon challenges collegiate teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency. Autodesk software and services were used to design the amazing houses created by students at the US and China Solar Decathlon events in 2013. Using Autodesk Revit BIM software team RhoMe wins Solar Decathlon Europe 2014 Autodesk software and cloud services (AutoCAD, Revit, 3ds Max and Vault) were used to design several amazingly sustainable houses and buildings by many student teams at Solar Decathlon Europe 2014 in Versailles, France. Listen to the participating student teams to know how Autodesk helped them in the design and data management process and even win the competition.