

Give your students flexible 30- or 60-minute lessons appropriate for both the classroom and independent study programs.

Easy to Use, Learn, and Teach



SolidWorks provides step-by-step tutorials and a project-based curriculum that are easy to use, learn, and teach.



The SolidWorks Education Edition contains a variety of exercises to develop your students' engineering, science, mathematics, and technology competencies. Whether for a 40-minute lecture, two-week project, semester-long course, or full-year program, the SolidWorks Tutorials, and the SolidWorks Curriculum and Courseware give you flexible teaching tools. No matter what your grade level or subject, SolidWorks software helps your students learn and understand the fundamentals of design, engineering, and analysis.

Visit: www.solidworks.com/curriculum



Three Lessons

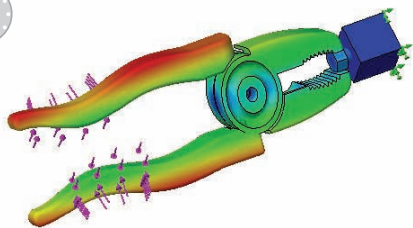


Use different techniques to create multibody parts.

SolidWorks Tutorials

SolidWorks software provides 37 step-by-step tutorials that guide students through the fundamental concepts of modeling. Located in the Help menu, these electronic tutorials require no printing. Students can be assigned 30- to 60-minute lessons in a classroom setting or independently. Eleven lessons are explored in greater depth in the SolidWorks Teacher Guide, providing goals, assessments, and related exercises.

Languages: English, Chinese, Czech, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish



SolidWorks Simulation Tutorials

SolidWorks Simulation software provides 40 step-by-step tutorials that guide your students through the fundamental concepts of analysis. These 30- to 90-minute lessons cover analyses, such as linear stress, parameters and design scenarios, shape optimization, temperature distribution, frequency and fatigue.

Languages: English, Chinese, Czech, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish

Teacher and Student Guides



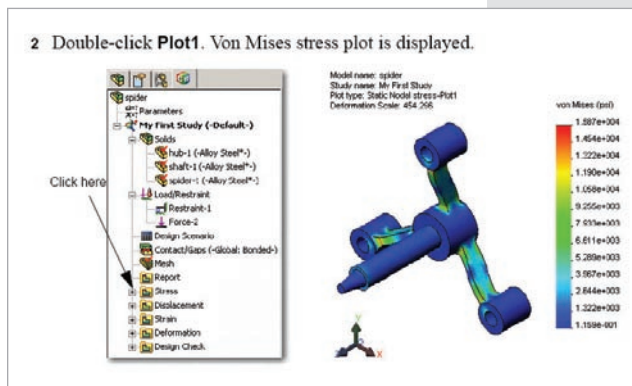
SolidWorks Teacher and Student Guides

The SolidWorks Teacher Guide provides an introduction to engineering design and features 11 lessons that correspond to the SolidWorks Online Tutorials. This fully reproducible, 500-page document incorporates lesson plans, PowerPoint presentations, student goals, vocabulary, and answers to student assessments. Other exercises stimulate students' imaginations with real-world applications. A corresponding SolidWorks Student Guide provides exercises and assessments for your students.

Topics include:

- | | |
|---------------------------------------|---|
| Lesson 1: Using the Interface | Lesson 7: eDrawings Basics |
| Lesson 2: Basic Functionality | Lesson 8: Design Tables |
| Lesson 3: The 40-Minute Running Start | Lesson 9: Revolve and Sweep Features |
| Lesson 4: Assembly Basics | Lesson 10: Loft Features |
| Lesson 5: Toolbox Basics | Lesson 11: Visualization with PhotoWorks™ |
| Lesson 6: Drawing Basics | |

Languages: English, Chinese, Dutch, French, German, Italian, Portuguese, Spanish, Swedish



SolidWorks Simulation Teacher and Student Guides

The SolidWorks Simulation Guide features an introduction to the principles of stress analysis. Fully integrated with SolidWorks, design analysis is an essential part of completing a product. This fully reproducible document incorporates lesson plans, PowerPoint presentations, student goals, vocabulary, and answers to student assignments. A corresponding SolidWorks Simulation Student Guide provides exercises and assessments for your students.

SolidWorks tools simulate the testing of your model's prototype working environment. It can help answer questions such as, how safe, efficient, and economical is your design?

Languages: Chinese, English, French, German, Italian, Spanish

SolidWorks Flow Simulation is an analysis tool for predicting the characteristics of various flows over and inside 3D objects modeled by SolidWorks, thereby solving various hydraulic and gas dynamic engineering problems.

Languages: English, Japanese

TREBUCHET DESIGN PROJECT, BRIDGE DESIGN PROJECT, AND HANDS-ON TEST-DRIVE



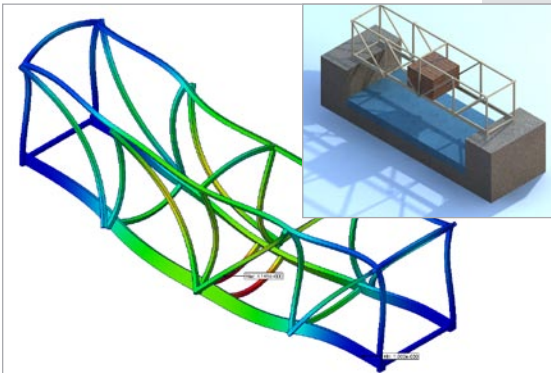
Trebuchet Design Project

The Trebuchet Design Project is a 200-page document that steps a student through the parts, assemblies, and drawings used to construct a trebuchet. Utilizing SolidWorks SimulationXpress, students analyze structural members to determine material and thickness.

Mathematics and physics competency-based exercises explore algebra, geometry, weight, and gravity.

An optional hands-on construction with models is provided by Gears Educational Systems, LLC.

Language: English, French



Structural Bridge Design Project

The Bridge Design Project steps a student through the engineering method for constructing a trussed wooden bridge.

Students utilize SolidWorks Simulation to analyze different loading conditions of the bridge.

An optional hands-on activity is provided by Pitsco, Inc., with classroom kits.

Languages: English, French, German, Spanish

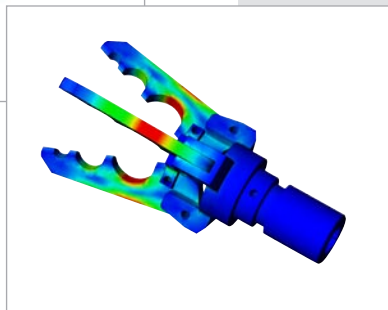


SolidWorks and SolidWorks Simulation Hands-on Test-Drives

The Hands-on Test-Drive series gives teachers and students a quick overview of SolidWorks capabilities, as they work on a real-life project.

The SolidWorks Hands-on Test-Drive is based on the SeaBotix LBV® model. Step by step, students design SolidWorks parts, assemblies, drawings, SolidWorks SimulationXpress, DWG conversion, and eDrawings® files.

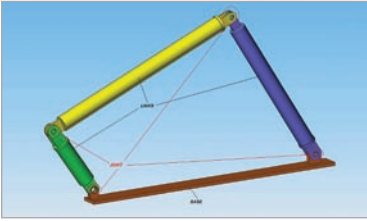
Languages: English, French



In the SolidWorks Simulation Hands-on Test-Drive, students follow step-by-step instructions to investigate temperature distribution, stress, drop-test, fatigue, optimization, motion, and flow analysis.

Languages : English, French

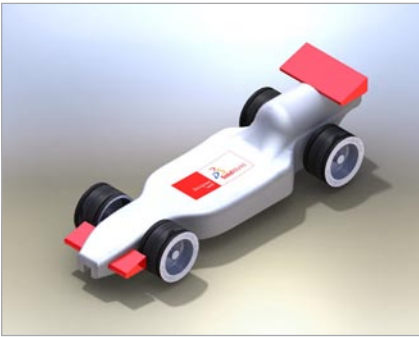
SOLIDWORKS MOTION TOOLS FOR TEACHER AND STUDENTS



SolidWorks Motion Teacher and Student Guides

An Introduction to Motion Analysis with SolidWorks Motion provides step-by-step examples to incorporate dynamic and kinematics theory through virtual simulation.

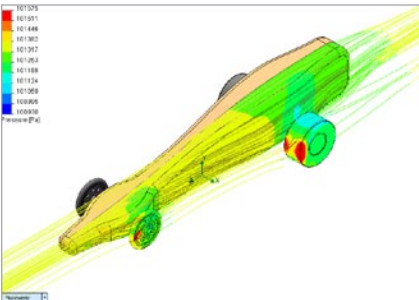
Languages: English, Chinese, French, German, Italian, Japanese



F1 in Schools™ Race Car Design Project

Explore the concepts of 3D modeling, production drawing, animation, photorealistic rendering, and force analysis in the F1 in Schools™ Race Car Design Project. Your students can better understand theory and basic engineering design principles.

Languages: English, Chinese, French, German, Spanish



Building a CO₂-Powered Car

This project leads students through the steps of designing and analyzing a CO₂-powered car, from the car body design in SolidWorks to the analysis of air flow in SolidWorks Flow Simulation. Students must make design changes in the car body to reduce drag.

They will also explore the design process through production drawings. An optional hands-on activity is provided by Pitsco, Inc., with classroom kits.

Language: English

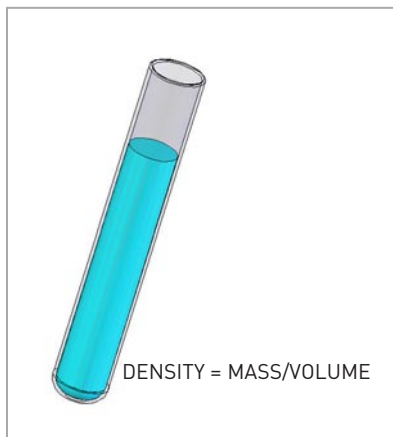


Mountain Board Design Project

The Mountain Board Design Project is a competency-based learning activity that takes your students through an interactive design project. Complete with goals and assessment, this 500-page document leads students through varied experiences with practical applications, including the iterative process, implementing design ideas, engineering a product, analysis for improving performance, and visualization for marketing a product.

Language: English

Additional Online Resources:



Additional Online Resources for Instructors: Science, Technology, Engineering, and Math (STEM)

Visit: blogs.solidworks.com/teacher

The SolidWorks–STEM curriculum provides teachers concise online examples that allow students to use their imagination in 3D, while learning the fundamentals of science, technology, engineering, and math. The SolidWorks–STEM curriculum enhances teachers' knowledge in 3D applications of math, science, and engineering principles at all grade levels.

Languages: English, French, German

Discussion Forums Visit: forum.solidworks.com



CSWA Certification Program

The Certified SolidWorks Associate (CSWA) Certification Program provides the skills students need to work in the design and engineering fields. Successfully passing the CSWA Exam assessment proves competency in 3D CAD modeling technology, application of engineering principles, and recognition of global industry practices.

Languages: English, Chinese, French, German, Italian, Japanese, Korean, Portuguese, Spanish, Turkish

To Apply: www.solidworks.com/cswa

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