

Model Components in SolidWorks® Bring Designs to Life with **GEARS-IDS™**

DESIGN, BUILD, TEST & LEARN with GEARS-IDS™ Invention & Design System

**Invest in the best “hands-on”
engineering program!**



GEARS-IDS™ ADVANTAGES

- * **Hands-on projects** & curriculum resources bring to life Science, Technology, Engineering, & Math principles.
- * **Re-configurable, customizable**, built to last for years.
- * **Industry grade pneumatics and gearhead motors.**
- * **Electronics** include speed controllers, digital switches, 12-volt battery, charger, wire, and connectors.
- * **Interfaces with programmable controllers or RC radios.**
- * **Open-ended prototyping platform.**
- * **CAD solid models available for download.**
- * **Precision-machined** Steel & Aluminum drive components.
- * **All components organized** in a storage container for classroom management.
- * **Easy assembly with just hand tools.**
- * **Used in high schools and colleges** across the country.

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Gears
Educational Systems, LLC

GEARS & SolidWorks® Team Up For Engineering

Now you can use SolidWorks® to model your concepts and then use GEARS-IDS™ to test and build your designs next to your workstation. Using GEARS every school can participate in engineering design competitions similar to those played at universities and at national robotics events! GEARS-IDS™ is more than a robust mechanical platform for classroom and outdoor **robotics**. Use GEARS to illustrate physical science and pre-engineering principles, or as the basis for a year-round technology education.

GEARS is all about creativity. It is designed to be customized with your own fabrications or third party components, such as manipulators, actuators or cameras.

Note: GEARS orders receive a free SolidWorks® Student Design Kit (60 Day License).

**Visit our web site www.gearseds.com
for free sample curriculum!**

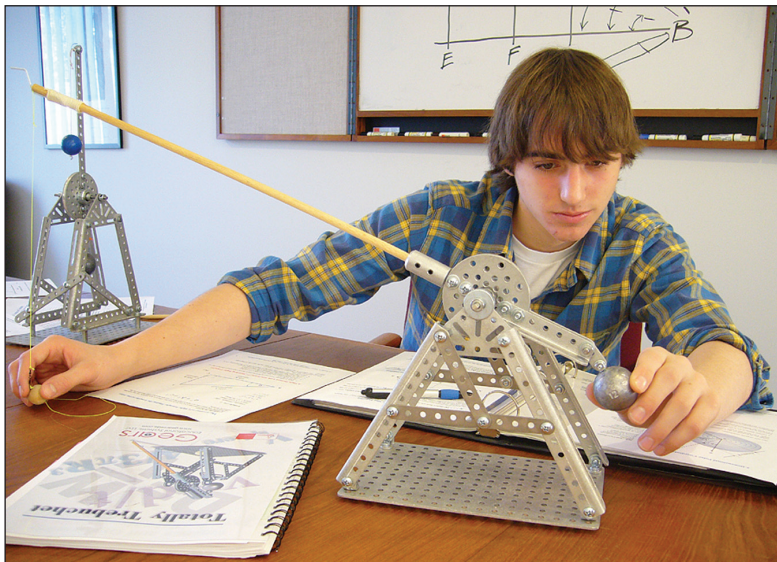
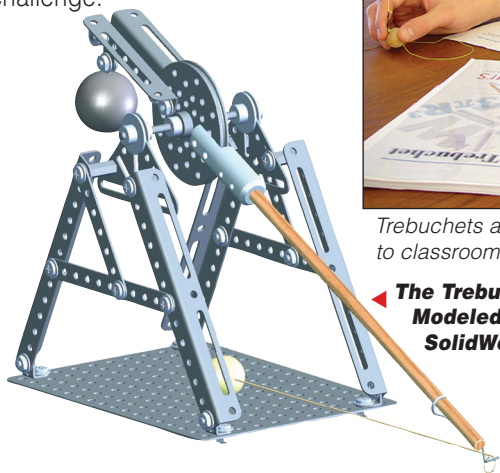
**Contact Mark Newby today
at mnewby@gearseds.com.**

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New **“Totally Trebuchet”** Program Combines SolidWorks® with STEM Based Lessons

GEARS-IDS™ introduces our new **Totally Trebuchet Kit** and **Curriculum** program. Using the same robust components found in our full system, students will acquire science, technology, engineering and math skills by asking and answering the questions they need to successfully compete in the **Totally Trebuchet** engineering challenge.



Trebuchets are fun to design and build. Totally Trebuchet activities are scaled to classroom size spaces, school hallways or playgrounds and playing fields.

◀ **The Trebuchet
Modeled in
SolidWorks**

The Totally Trebuchet Curriculum

The **Totally Trebuchet** 6 to 8 week curriculum is a suite of self-paced tutorials, teacher-led lessons, and project-based activities. The program provides an organized structure in which students acquire engineering skills and competencies through the design, construction, refinement and competitive use of a model trebuchet. Students work in a “hands-on” environment. Watch as they learn how the discoveries of Pythagoras, Galileo and Newton help them build better trebuchets. The **Totally Trebuchet** project is powered by gravity, not batteries.

Students model their designs in SolidWorks® and become familiar with its many powerful CAD features. A complete trebuchet tutorial is included with the SolidWorks® 2006-2007 Education Edition.

Contact Mark Newby at mnewby@gearseds.com.

Comprehensive 6 to 8 Week Program Provides:

- An introduction to engineering curriculum authored and edited by teachers and engineers!
- Lessons, activities, assessment tools and competitive engineering challenges.
- All the science, technology, engineering and math tools necessary to design, build, analyze and improve the performance of your working trebuchet!
- Heavy duty structural components that are easy to use.
- TrebStar® Computer simulation software.

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