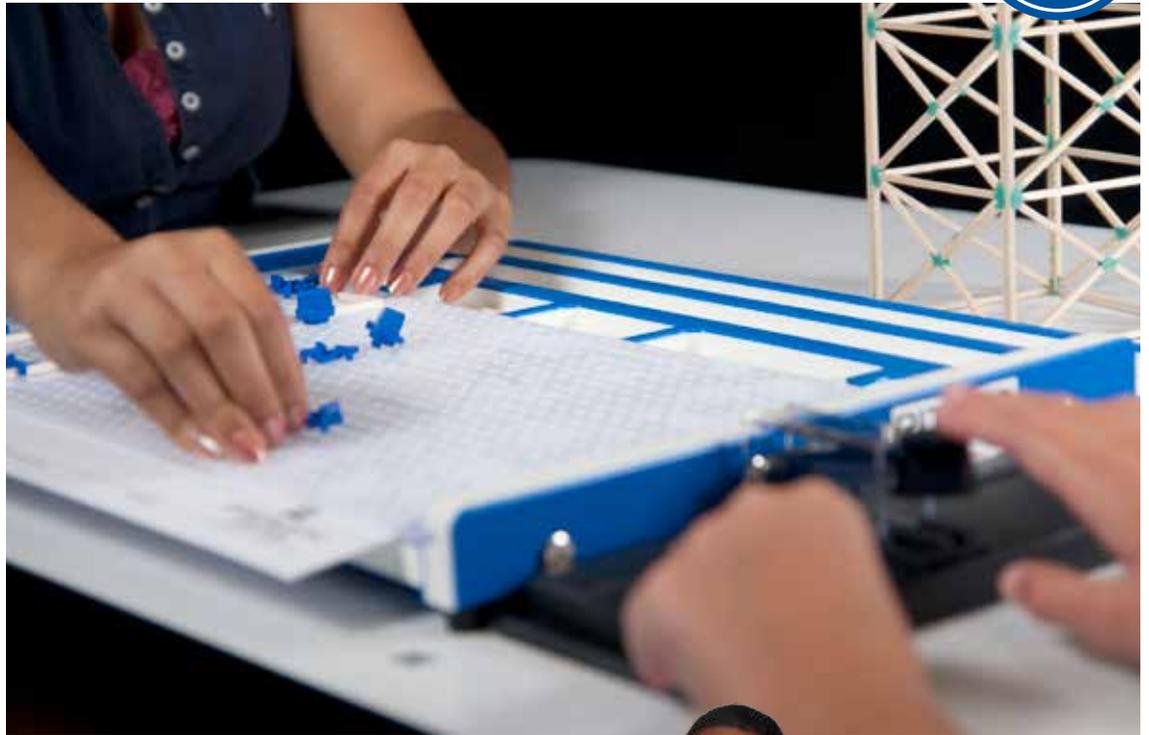


ENGINEERING

EXPLORING ENGINEERING

One Powerful Mission • One Proven Resource



In Exploring Engineering, students explore basic concepts and detailed applications of engineering. Students experience the planning and design, physics, and analysis and testing aspects of engineering while creating and working with prototypes. Students gain insight to real-world careers in engineering while preparing for more advanced science and engineering courses they will encounter later in high school.

- Applied Physics
- CADD
- CNC Manufacturing
- Electronics
- Energy, Power & Mechanics
- Engineering Towers
- Flight Technology
- Forces
- Home Makeover
- Ideas & Innovations
- Intelligent Homes
- Robots
- Rocket Science
- Weights & Measures



Complete Solutions for Exploring Engineering

Applied Physics

Students learn about the application of physics in nature and how controlling those forces makes life more enjoyable.



CADD

Students use computer-aided drafting, CAD, software, to explore the fundamentals of design and drafting.



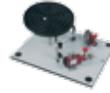
Electronics

Students learn the common components of basic circuits in electronic devices and the application of each component.



Energy, Power & Mechanics

Students obtain an understanding of energy sources, power technology, and the mechanical advantage of machines.



CNC Manufacturing

Students explore the manufacturing process and important inventions that have advanced these various processes.



Flight Technology

Students learn about principles of flight using simulations and applications.



Forces

Students explore forces and how they affect the motion of objects.



Engineering Towers

Students utilize math, physics, and problem-solving skills to design and construct a tower.



Ideas & Innovations

Students are exposed to problem-solving strategies and use critical-thinking skills to find solutions.



Intelligent Homes

Students learn the history of X10 technology and about home automation-control technologies.



Home Makeover

Students learn the basics involving remodeling a home, including financing, designing, constructing, and finishing.



Rocket Science

Students learn about the scientific principles of flight, propulsion, and aerodynamics.



Weights & Measures

Students learn about international and customary units of measurement and performing conversions through application.



Robots

Students learn how to operate, program, and use robots in different environments.



3D Printing: Explorations in Innovation



Vehicle Engineering

Enables students to create prototype components and other parts. Includes 3-D printer, software, curriculum, handling tools, ABS filament, and 3-D Prototyping Class Pack complete with Engineering Notebooks and everything needed to build battery-operated cars.



Design Solutions

Enables students to create two small designs that may be 3-D printed. Includes four 3-D printers, activities that foster a greater understanding of 3-D design, and curriculum that enables instructors to present basic 3-D design along with copyright and patent information.



Vehicle Engineering AND Design Solutions

This option includes both Vehicle Engineering and Design Solutions. This powerful combination features everything you need to teach key aspects of 3-D design, prototyping, and engineering and it is easy to understand and easy to use.