TAKE SCIENCE TO THE NEXT LEVEL

MAKER CRATES FOR YOUR MAKERSPACE
Create an Innovation Workspace

Pearson

elevate science

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uEngineer It! Maker Crates – Create Your Own Innovation Center

Innovation centers, better known as “Makerspaces,” provide students with opportunities to develop 21st century skills like creativity, collaboration, and communication. Students share knowledge, compare ideas, and demonstrate expertise as they work alongside each other designing and applying core ideas to solve problems.

Design Challenges Bring STEM to Life

The following design challenges can be developed with the materials provided in the uEngineer It! Maker Crates.

**AMUSEMENT THEME**

Participate in the exciting entertainment industry.

- Design a new type of amusement park attraction or ride.
- Create a model amusement ride that runs on solar energy.
- Build a zip-line device that can move objects across a given distance and back again.
- Design a way to move people through the mall or up and down a slope.

See the Full List of Materials! PearsonSchool.com/ElevateSci
CONSTRUCTION THEME
Design a structure or device that meets a set of given criteria.
• Design a structure to support a given weight and/or use the least amount of materials.
• Create a catapult that tosses an object a given distance.
• Build a bridge of a specific length that will support the most weight.
• Construct a prosthetic device that mimics a hand, an arm, a leg, a wing, a beak, a claw, or even a fin!
• Be creative and develop a new design for a better flycatcher, a new type of pet feeder, or a new door alarm.

TRANSPORTATION THEME
Create a device (car, truck, boat) powered by a form of energy (wind, solar, or electric).
Be creative! Challenges might include:
• Build the fastest, lightest, or smallest device.
• Make it travel a given distance or go the farthest.
• Maybe it must carry cargo or navigate an incline.
• Try different methods of powering your device like rubber bands or balloons, or create a sail that captures the wind. Perhaps solar panels use the sun’s energy to generate the electric motor.

ENERGY THEME
Build a device (windmill, water wheel, game) that transfers energy from one form to another.
• Construct a device that uses wind energy to perform a task — lift a mass, move water, or generate electricity.
• Create a model house that uses solar energy to power its lights and heat.
• Design a game that uses moving water as its source of energy.
• Build a Rube Goldberg device that models multiple transfers of energy. How many energy transfers can you make occur?
Experience the Excitement of Makerspaces

Makerspaces are perfect for nurturing a STEM-focused curriculum where students take control of their own learning as they experiment, innovate, create, and iterate. Encourage perseverance and productive failure as students hone their critical thinking skills.

**BENEFITS OF MAKERSPACES**

- Focus on creativity, collaboration, and innovation.
- Extend learning beyond the traditional classroom time.
- Engage all types of learners with open-ended experimentation.
- Integrate inquiry-focused learning with engineering and design principles.
- Provide for interdisciplinary, cross-curricular projects including literacy.