



Interactive STEM Toolbox



Mission	Description	Career Clusters
Dolphin Rescue	Help rescue and rehabilitate an injured dolphin, including creating an artificial prosthetic tail	Biomedicine, Marine Science, Telecommunications
Energy Sources	Evaluate alternative or upgraded energy sources for a city that currently has an old coal-fired power plant	Energy Production, Environmental Science
Entrepreneurship	Set up a new business with a focus on entrepreneurship	Finance, Business, Resource Management
Flu Outbreak	Learn how health and IT professionals use data and GIS and social media data analysis to predict flu outbreaks	Information Technology, Disease Management
Fresh Food	Consider methods to increase production of local foods in a community	Agricultural Science
Hack Attack	See how web development, apps and social media experts restore a school's website and media after being hacked	Computer Science, Cybersecurity
Haiti Orphanage	Design and build an environmentally-sound orphanage for children left homeless by an earthquake in Haiti	Civil Engineering Sustainability
Heart Surgery	Understand heart surgery techniques and therapy used to treat a child's heart defect	Medicine, Healthcare
Lightweight Aircraft	Design a lightweight and easily maintained aircraft for multiple roles and mission distances	Aerospace, Recycling, Manufacturing
Manufacturing a Concept Car	Use modern manufacturing techniques to design and build a new concept car	Advanced Manufacturing, Industrial Engineering
Rescue Robots	Explore technology and techniques used in robotics design, such as sensors, circuits, industrial design and computers	Electronics, Computer Science
Transportation Congestion	Evaluate new transportation methods for a city with traffic congestion problems	Transportation, Mechanical Engineering
Intro to Computer Science	Learn about some of the most in-demand CS careers and technologies (condensed version of Hack Attack)	Computer Science, Information Technology

Our Expanding STEM Toolbox

Learning Blade is constantly adapting and expanding to allow educators to integrate STEM awareness and career readiness into their teaching needs.



Interactive Lessons

Over 400 online lessons connect more than 100 STEM careers and technologies to students' academic skills, demonstrating real-world problem solving.



Design Thinking

Students use Design Thinking methodology to solve complex problems through brainstorming, collaboration, and the creative exploration of new possibilities.



Challenge Projects

Simple hands-on activities emphasize problem solving, critical thinking, teamwork and communication using readily-available materials.



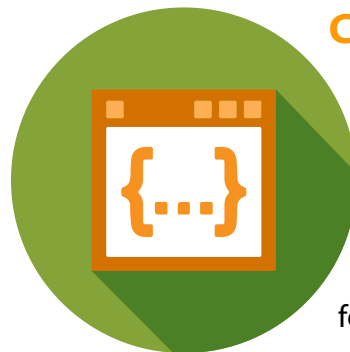
3D Printing Activities

3D printing experiments and projects demonstrate STEM principles and provide students experience turning 3D designs into physical items.



Career Videos

Each STEM career addressed in our online lessons also includes a career introduction video presenting the career and its education pathway.



Coding Activities

Fun, interactive coding lessons introduce students to computer science and the development of problem-solving skills, logic, and creativity needed for success in career paths.



Parent Discussions

Parent-ready handouts stimulate STEM conversations at home, help fill ESSA requirements for parental involvement, and encourage research and simple at-home experiments.



Papercraft Figures

Each STEM career and technology is accompanied by a 3D papercraft figure students can assemble, helping internalize a knowledge of 3D shapes and offer a tangible reminder of the careers and technologies.

