

FACT SHEET

ABOUT UL XPLORLABS

As part of its overall mission to work for a safer world, UL is committed to increasing scientific literacy and student engagement. UL Xplorlabs connects classrooms to safety engineering challenges, real-world applications and innovative solutions.

UL Xplorlabs is an educational platform designed to encourage students to solve through science. It is focused on engaging middle-school students when interest in science is shown to decrease dramatically. The program showcases the science behind safety engineering. Through interactive videos, instructional experiences, hands-on classroom activities and creative challenges, this free, STEM-focused experience:

- Builds scientific knowledge, passion and commitment among students
- Aligns with the Next Generation Science Standards connecting disciplinary core ideas and crosscutting concepts
- Makes it simple to implement hands-on investigations in the classroom
- Shows students that by using scientific inquiry to ask why a phenomenon happens, they can solve real-world problems and create innovative solutions for a safer world

ABOUT UL

UL, a global safety science company, has been working for a safer world since 1894 to promote safe living and working environments for people by the application of safety science and hazard-based safety engineering. To learn more, visit UL.com.

XPLORLABS

MODULES

Each UL Xplorlabs module focuses on a specific topic relevant to issues in science and engineering and what is relevant to students' everyday lives. Xplorlabs has been designed to bridge the gap between the classroom and real-world science and engineering challenges. Each module contains content-rich experiential elements like interactive video, online experience, classroom activities, and challenges. An in-depth Teacher Guide also supplements each module to provide a roadmap and supporting content for the lessons. Two modules are currently available:



The **Portable Electrical Power** module explores the science of lithium-ion batteries, introduces the phenomenon of thermal runaway and inspires students to think like a scientist to identify essential construction and performance requirements to recognize the inherent risks a product could present. The focus of this module is the hoverboard.



The **Fire Forensics: Claims and Evidence** module is designed to provide students with the understanding of fire, fire dynamics and fire behavior so that they can read a fire scene and build a claim for the fire's location of origin and cause.

NEXT GENERATION SCIENCE STANDARDS ALIGNMENT

All investigations are aligned with **Next Generation Science Standards** (NGSS) middle school benchmarks in physical science, including crosscutting concepts, application of science and engineering practices and attention to disciplinary core ideas. The landing page for each module lists specific standards covered. By aligning modules to NGSS educators are able to utilize the content in a number of flexible ways. Xplorlabs goes one step further by introducing new and exciting STEM career paths for students by connecting to the work happening at UL.

WHAT EDUCATORS ARE SAYING



"The content is challenging, yet perfectly logical. Best of all, it adds a lens of reality to what Hollywood may want us to believe is a glamorous field, while doing nothing to diminish its allure and appeal. The developers at Xplorlabs will undoubtedly 'light the fire' for many students throughout this module."

– Andrew Larson, Science and Language Arts Facilitator at Columbus Signature Academy New Tech High School and contributor to *Getting Smart*

"Ultimately, given that this Learning Module is free for teachers, there is no reason not to give it a try. My recommendation is to find a way to integrate this into your middle school classroom."

– Edwin P. Christmann, professor and chairman of the secondary education department and graduate coordinator of the mathematics and science teaching program at Slippery Rock University and contributor to *NSTA Recommends: Technology*