



idea camp

Students 5th - 12th grade engage in one-week STEM workshops where students **invent, design, engineer, and achieve**. We'll learn together and participate in hands-on activities.

**SCIENCE &
TECHNOLOGY**

ENGINEERING

MATHEMATICS

UMass Lowell North Campus



[Register](#)



SCHOLARSHIPS AVAILABLE

Questions?

padams@lowell.k12.ma.us





SESSION ONE

June 29 - July 3 | 8am-2pm

STEM MASH-UP

Grades 5-8

This is an introductory course for STEM activities. Students will try out engineering challenges like a Shark Tank escape, Spaghetti Tower, Paper Airplane Challenge & strongest bridge challenge.

CODING WITH SPHERO BATTLE-BOTS

Grades 8-11

Students will learn how to code, then observe and build robotic designs for battle bots. Using the engineering design process, students will build protective armor for their sphero robot that focuses on offense, defense, and controlability in different situations. Once completed, students will compete and "battle" with fellow students' robots.
May the best battlebot win!

ARCHITECTURE AND DESIGN

Grades 7-11

Students will learn about the field of structural engineering. Students will design and create a bridge, then participate in a bridge challenge. Students will also complete a 3D kit of their dream house, including 3-D furniture. Students will be introduced to graphic design and create an architecture logo.

**ALL CAMPS LOCATED AT UMASS
LOWELL NORTH CAMPUS, WITH ALL
SUPPLIES INCLUDED**





SESSION ONE

June 29 - July 3 | 8am-2pm

GAME-MAKERS

Grades 5-8

Game development has come a long way from Pacman and Pong, yet 2D games still hold their own in the gaming world. In this camp, students will learn the basics of game development that allow videogames like Undertale and Terraria to compete with the bigger game studios. Students will learn mechanics and design techniques through the development of multiple games and will have the opportunity to create their own personal game from scratch!

CAREERS IN MEDICINE

Grades 9-12

Discover your future in healthcare at our exciting summer camp! Explore a wide range of careers in medicine through engaging, hands-on labs, interactive activities, and real-world experiences. Enjoy field trips that bring learning to life and gain valuable lifesaving skills by becoming CPR certified. It's the perfect opportunity to learn, explore, and get inspired!

CRIME SCIENCE

Grades 5-7

Students will participate in hands-on activities to help them understand how a crime would be solved. Activities such as fingerprinting, DNA typing, chromatography, blood typing, and handwriting analysis will help students put clues together to identify suspects in a crime. This course will be geared toward younger students and students can continue the following year to a more advanced Forensic Course.

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SESSION TWO

July 6 - July 10 | 8am-2pm

RECYCLE/ UPCYCLE

Grades 9-12

This course focuses on current environmental issues in Lowell. Students will learn how to use everyday items to upcycle. We will create projects using items that would normally be put into landfills. We will also discuss ways to eliminate waste and be more purposeful with our purchases to be environmentally conscious. This camp will also include a tour of the Plastic Engineering Lab at UMASS Lowell.

FORENSICS

Grades 8-12

In this more advanced crime science course, students will be exposed to the physical and biological evidence of a crime scene. Students will be introduced to the knowledge and laboratory techniques used by forensic scientists in their analysis of crimes, as well as the role of forensic evidence in criminal and civil proceedings. Topics include DNA analysis, body decomposition, fingerprinting, and cause of death. Students will evaluate a crime scene for evidence.

ADVANCED STEM MASH- UP

Grades 8-12

Advanced STEM MASH Up: This is an advanced STEM course where students will learn how a flashlight works and how to improve mechanical designs. Students will code to make their own apps, as well as a rube goldberg device.

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