Excursions in Learning

FULL S.T.E.A.M. AHEAD!

FOR STUDENTS IN GRADES K-8 IN THE 2016-2017 ACADEMIC YEAR

A student's grade level is the grade he or she has just completed in the 2016-2017 school year, sorry no exceptions.

- Science
- Technology
- Engineering
- Art
- Mathematics

Grades K-8
Week 1 July 10-14
Week 2 July 17-21
9 AM-4 PM
Register for one or both!

What is STEAM?

"STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking. The end results are students who take thoughtful risks, engage in experiential learning, persist in problem-solving, embrace collaboration, and work through the creative process. These are the innovators, educators, leaders, and learners of the 21st century!" – EducationCloset.com

	Grades K-1*	Grades 2-4*	Grades 5-8*
Week 1 July 10-14	Math, MineCraft© & More Famous Scientists Throughout History	Math, MineCraft© & More Famous Scientists Throughout History	Lego Robotics Renewable Energy=Endless Energy
Week 2 July 17-21	LEGO Science, Math & Design Exploring Nature Through Art & Technology	LEGO Science, Math & Design Exploring Nature Through Art & Technology	Underwater Robotics Amusement Park Design & Build

*A student's grade level is the grade he or she has just completed in the 2016-2017 school year, sorry no exceptions.

Register for one week or two!

Must attend full day, 9AM-4PM.
$300 per week.

See reverse side for full course descriptions →

Excursions in Learning YOUTH PROGRAMS
Manchester Community College

MANCHESTER COMMUNITY COLLEGE
CONTINUING EDUCATION

Excursions in Learning

FULL S.T.E.A.M. AHEAD!

Grades K-1 and 2-4

Full STEAM Ahead!

Our children learn best through hands-on, creative and authentic activities. Lessons that stimulate inquiry, investigation, problem solving, cooperation, creativity and physical interaction with the world around them. Join us for this hands-on, innovative approach to learning. Student will explore a variety of STEAM topics through messy science experiments, unusual art projects, and advanced technology. Explore math, art and team building through MineCraft©. Be creative designing your own space station. Explore math, science and art through building. Learn computer coding. Recreate the experiments or artistic masterpiece of famous scientists and artists throughout history. There is so much to learn and discover in this new course. Inspire your future innovator!

WEEK 1 - July 10-14
Topics: "Math, MineCraft© & More" and "Famous Scientists throughout History"
Monday-Friday | 9 AM-4 PM | $300

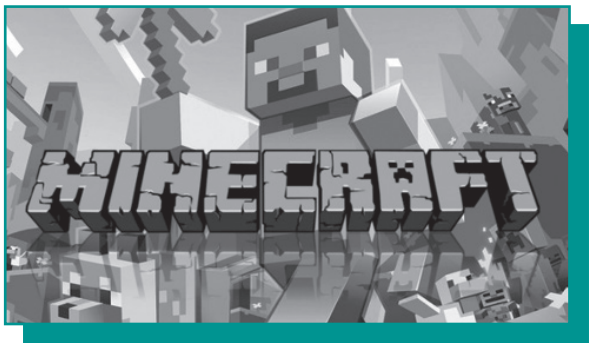
For Grades K-1 | two identical sections: CRN# 20762 or CRN# 20764
For Grades 2-4 | two identical sections: CRN# 20761 or CRN# 20763

WEEK 2 - July 17-21
Topics: "LEGO© Science, Math & Design" and "Exploring Nature through Art & Technology"
Monday-Friday | 9 AM-4 PM |$300

For Grades K-1 | two identical sections: CRN# 20765 or CRN# 20766
For Grades 2-4 | two identical sections: CRN# 20767 or CRN# 20768

Register for one week or two!

Must attend full day, 9AM-4PM.
Instructors: Kelly Owens, Jennifer Renkiewicz, Jennifer Scully, Margaret Seclen, & Kristen Shypula.
$300 per week.



Grades 5-8
(formerly Technology Camp)

WEEK 1 - July 10-14
Topics: "LEGO Robotics" and "Renewable Energy=Endless Energy"
Monday-Friday | 9 AM-4 PM | $300

LEGO® Robotics

Explore the world of LEGO® Robotics! Students will have hands-on experience designing, building and programming multiple robots. Students will learn about different sensors, programming tasks and objectives, the LEGO® programming software and more. Daily obstacle courses will challenge each group to work together to create a robot to complete a specific task. Some team challenges include sumo wrestling matches or obstacle courses. The scientific method will be used as students test their robots against the challenge – data is collected, analyzed and discussed. Will your robot be the most successful?

Renewable Energy = Endless Energy

Solar, wind and hydropower are clean energy solutions, which offer alternatives to carbon dioxide producing fossils fuels to meet peoples' need for energy. Apply concepts about energy, force, and motion as you construct working models that harness the power of these renewable energy sources. With fossil fuels becoming more difficult to find and extract, renewable energy is the key to having the energy to power our lives. Remember: no energy = no video games!

CRN 20623 | AM: LEGO Robotics & PM: Renewawable Energy
CRN 20624 | AM: Renewawable Energy & PM: LEGO Robotics

Instructors: Jesse Wilkinson & Tom Ebersold

WEEK 2 - July 17-21
Topics: "Underwater Robotics" and "Amusement Park Exploration"
Monday-Friday | 9 AM-4 PM | $300

Underwater Robotics

Students will work in small groups to design, build and test an underwater ROV (Remotely Operated Vehicle). Their design will be built off of the MATE (Marine Advanced Technology Education) "Pufferfish" ROV kit. Each team will design and make modifications to their ROV so that it will be able to accomplish specific underwater tasks. Students will follow the "Engineering and Design Cycle" that will allow them to continue to test and make modifications to their ROV until they feel it is ready for the competition on the final day. Next Generation Science Standards for "Design & Engineering Practices" will be followed.

Amusement Park Design & Build

An amusement park is the perfect laboratory for exploring the forces of motion. As a group, build a model working amusement park with rides powered by motors, including such favorites as the carousel, the Ferris wheel and the rollercoaster. As junior engineers, experiment with ride designs to add your creative touches to standard models.

Instructors: Ed Argenta & Tom Ebersold

CRN 20625 | AM: Underwater Robotics & PM: Amusement Park Exploration
CRN 20626 | AM: Amusement Park Exploration & PM: Underwater Robotics

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Manchester Community College

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