



STEM On Site @ MSOE

Are you a school or organization looking for a hands-on STEM experience? STEM on Site programs are an opportunity for students in grades 1–12 to explore STEM beyond their classroom. All of our activities encourage teamwork, creativity and critical thinking. These programs typically last 1–1.5 hours.

PROGRAM OFFERINGS

All STEM on Site programs are hands-on, group experiences. You can expect students to leave

having learned something new about STEM along with how to solve problems utilizing the engineering design process.

Our team will work with you to pick a specific activity that best fits your group based on grade level and number of participants. Select a program cluster from the options below to get started!

To learn more and make a request, visit msoe.edu/stemonsite.

ENGINEERING DESIGN WORKSHOPS

These workshops are great for groups who want open-ended problems to solve. Students are presented with brief instruction to provide background knowledge and to define the problem they'll be solving. Students will spend a majority of their time designing, building and testing their prototypes. These workshops often have no "right" answers to the problem and provide the most opportunities for creative problem solving.

Workshop topics have included heart valve design, ziplines, space landers, thermal design and crash testing.

TECHNOLOGY AND CODING WORKSHOPS

If your group wants a blend of open-ended problem solving and step-by-step instructions, this workshop is a perfect fit. Students are presented with background knowledge and then have a brief instructional period with step-by-step instructions to learn the technology they are using. Approximately half the program time is spent in an instructional mode and the second half is an open format for students to design, build and test their solutions.

Workshop topics have included robotics, artificial intelligence and micro controllers.

EXPLORATORY LABS

If a more traditional, step-by-step learning environment is what you're seeking, our exploratory labs are the right place to be. Exploratory labs are run in a traditional instructor-led environment. Students will follow a step-by-step procedure while learning about the chosen topic. Students will be given the opportunity to change variables to explore ideas presented.

Lab topics have included electronics, chemistry, green energy, electromagnetics and industrial engineering.