



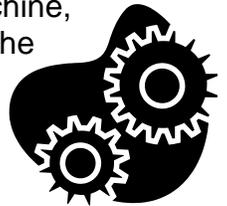
DesignLab After School Engineering Workshops

DesignLab is an after school activity for 8th grade students who are imaginative and creative, enjoy solving problems, like to work with their hands, have shown an interest in science and engineering, or all of the above! Two sessions of DesignLab workshops are offered each year. These workshops each meet for two hours once per week for 12 weeks. Space is limited to 12 students per workshop. The cost is \$67 per 12 week workshop. In previous years, we have been fortunate enough to have a guest engineer join us for at least one meeting of each session.

The **Electrical Engineering** workshop is offered in the fall. In this workshop, students learn about electricity, switches, series and parallel circuits, how to solder wires, how to use many different tools to build things, and the Engineering Design Process. They will experience some of what it is like to be an Electrical Engineer by designing and building their own electrical inventions. They will get to take home all of the projects they build, which include a light-up Frisbee, a bedroom alarm system, and a fortune-telling box (like a Magic 8 Ball).

The **Motorized Machines** workshop is offered in the spring. (Participation in the first workshop is not required.) In this workshop, students learn about gear drives, gear ratios, torque and the Engineering Design Process. They will also use many different tools, including soldering irons, drills, and laser tachometers. They will gain some experience in what it is like to be an engineer by designing and building their own motorized machines, which will include a spin art machine, a motorized pencil sharpener, and a pudding/smoothie mixer. At the end of the workshop, students will get to take home all of the projects they build.

If you want to learn more about the program, please contact Mrs. Kelly Graveson at kgraveson@douglas.k12.ma.us.



DesignLab is a program developed by UMass Lowell's Future Engineers Center and made possible with generous funding from the Honda Foundation, Motorola Foundation, Goodrich, and the Mark Gelfand Family Foundation.