Electronic Puzzle Design Workshops

Learn how to use microcontrollers to build your own puzzles, sensors and control systems!

Six two-hour* classes covering…..

1) **Getting started with microcontrollers.** We will be using the Arduino UNO micro. How to connect to it, basic programming concepts, basic hardware concepts—everything you need to know to get started!
2) **Simple digital I/O.** We will write some simple programs to input and output digital I/O to light LEDs, control relays and read switches.
3) **Analog I/O.** Reading analog voltages from electrical circuits and sensors. Outputting analog voltages to control electrical devices.
4) **Programming.** In the 4th class we will introduce some more advanced programming concepts and then use these ideas with analog and digital I/O.
5) **Advanced stuff.** In the 5th class we will look at how to interface with LCD and LED displays and some more advanced sensors.
6) **Project.** Finally, putting everything together to create a working project!

Get to keep and take home the hardware! We supply all the hardware and computers. If students want to bring their own laptops or Chromebooks we will get everything installed and working.

Other topics include: General micro-controller programming and use, electronics, soldering and project construction, advanced programming, MS Excel: macros and VBA. Tutoring in math and physics also available.

***Time/duration can be customizes. Individual or group training available. K-12 inquiries welcome.**

Recommended minimum age: 14

For more information e-mail Marcus at marcusj@noescapeiowa.com