

## Robotics II Lessons for 06-16 April 2020

Hey guys! I'm still here, how about you? I haven't received any e-mails from you, so I'm not sure you have been getting these lessons. PLEASE, send me a note at [ciskm@centralschools.org](mailto:ciskm@centralschools.org). Let me know what you have available as far as a computer, tablet, phone, etc.

Happy April Fool's Day. That's when my homework was due. I have been studying PYTHON and watching videos on writing rock music all week. I also just got a note from FedEx saying my Pi Zero W should be here Friday. Mr. Larivee helped me find some new on-line tools to help me working with the Raspberry Pi and designing electronic circuits. I talk with him more now than I did when things were *normal*.

Assuming you have been following along, now would be a good time for you to ask questions. Also, I will get the chance to help you choose what you study, since we are no longer in the same classroom.

I downloaded PYTHON 3.7 and PyCharm to practice, then Mr. Larivee suggested [pythontutor.com](http://pythontutor.com).

<http://pythontutor.com/>

I almost made it through a four-hour long video on PYTHON, but wasn't impressed with where it was going. I just started another one. It is six hours long, has stop points to practice, and goes into other uses for PYTHON that interest me.

<https://www.youtube.com/watch?v=uQrJ0TkZlc>

As you can see, it is designed for web developers, but the exercises I've seen so far look good for our use. If you can send me your code after

each exercise, we should be able to make good use of this video. I found another one that lasts 13 hours to evaluate for future use.

If you need a break from programming, Mr. Larivee another on-line tool for us. It is a circuit design and simulation program from TINKERCAD.

<https://www.tinkercad.com/circuits>

I don't like breadboards because my jumpers keep coming out, but this is GREAT!! I am using it to design and test electronic circuits. Then after I clean up the jumper locations, I am using a printed circuit board with the same paths as a breadboard to make permanent circuits without having to design a custom PCB. The one I am working on now uses a 556 timer chip. You can also add an Arduino and program it, add LEDs, motors, motor-drivers, ultrasonic sensors like in Robotics I. I will be designing some more, using operational amplifiers and AC circuits, then testing them with the built-in signal generator and oscilloscope.

As I hear from you, we can use all of these to customize your lessons and be more ready for next year than we would have been if things were normal. For those of you who are graduating, we can make the best of the time we have left, learning what interests you for what comes next.

I miss all of you. Hope to hear from you soon.

Mr. C