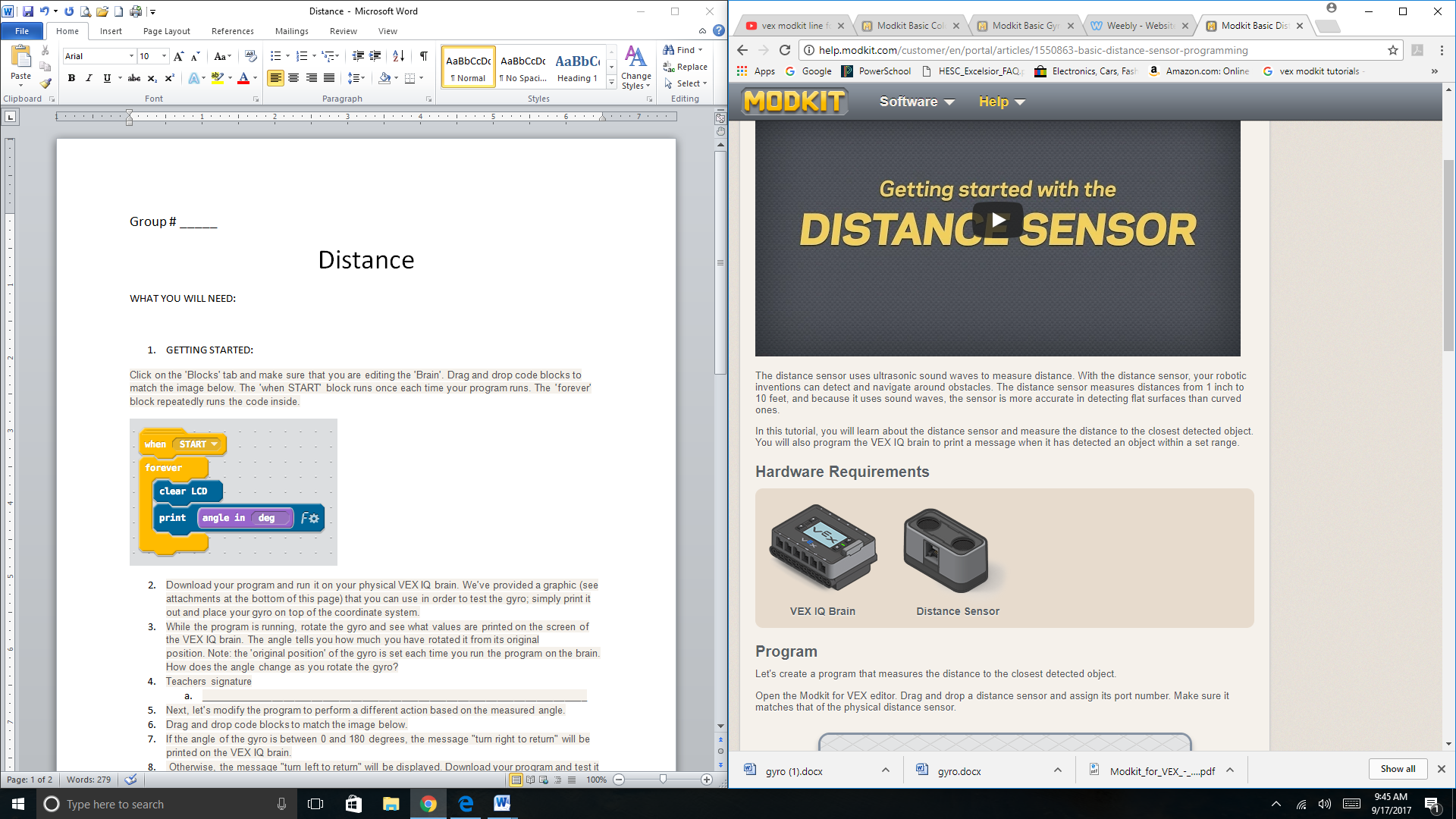
Group # \_\_\_\_\_

Distance

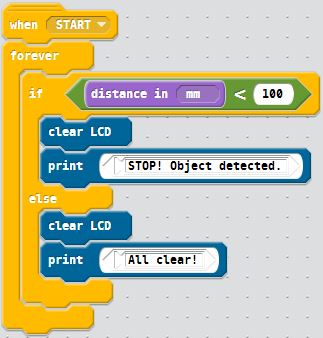
WHAT YOU WILL NEED:



1. GETTING STARTED:
2. Let's create a program that measures the distance to the closest detected object.
3. Open the Modkit for VEX editor. Drag and drop a distance sensor and assign its port number. Make sure it
4. Next, click on the 'Blocks' tab and make sure that you are editing the 'Brain'. Drag code blocks to match the image below.
   1. The 'when START' block runs once each time your program runs.
   2. The 'forever' block repeatedly runs the code inside, allowing your program to change and respond as it runs.



1. Download your program and run it on the physical VEX IQ brain. I have provided a graphic that you can use to test your program (See my WEB page); simply print out the graphic, and assemble the barrier as instructed on the print out.
2. You can make as many barriers as you'd like. Point the distance sensor at a barrier, and observe the distance value printed on the brain.  
     
   Teachers signature
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Modify the program to detect objects within a set distance.
   1. Drag and drop code blocks to match the image below.
   2. Set the distance range to 100mm.
   3. If an object is detected in the range, the message, "STOP! Object detected" will appear on the VEX IQ brain.
   4. Otherwise, the message "All clear!" will be printed.



1. Download your program and run it on the physical VEX IQ brain
2. Use the sensor and printed scale to measure distance
   1. Teachers signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_