

## CYBERCAMP INSTRUCTIONAL ACTIVITY SCHEDULE

**School Division(s):** Alexandria City Public Schools      **School:** T.C. Williams High School

**Camp Begin Date:** July 11th    **Camp End Date:** July 22      **Days of Week:** Monday - Friday

**Daily Instruction Begin Time:** 7:05    **Daily Instruction End Time:** 2:35    **Specify alternate schedules below**

**Lunch Period (begin/end):** \_\_\_\_\_      **Total instructional hours including guest speaker(s) field trip(s) and culminating**

**Enrollment:** 30      **activity:** \_\_\_\_\_

WEEK 1 -- July 11-15 2016				
Monday	Tuesday	Wednesday	Thursday	Friday
7:05-7:25 Breakfast 7:25-8:00 Icebreakers to let students get to know one another 8:00-8:30 Intro camp/staff/goals of camp 8:35-9:35 Pre-test 9:35-9:45 Pick teams 9:50-11:00 Flashlight build 11:00-11:15 Present flashlights/debrief 11:15-12:00 Lunch and guest speaker 12:00-12:30 Intro to humanities and cyber 12:35-1:05 Research current events 1:10-1:40 Careers in Cybersecurity/colleges 1:45-2:15 Intro to cybersecurities/networking 2:15-2:30 End of day wrap up and announcements	7:05-7:25 Breakfast 7:25-7:45 Recap previous days' activities and announcements for day Morning sessions: 7:50-8:40 Session 1 8:45-9:35 Session 2 9:45-10:35 Session 3 10:40-11:30 Session 4 11:30-12:15 Lunch and guest speaker Afternoon sessions 12:20-1:00 Session 5 1:05-2:15 Robotics 2:15-2:30 End-of-day wrap up and demos from day	7:05-7:25 Breakfast 7:25-7:45 Recap previous days' activities and announcements for day  Field trip – Neustar Cybersecurity attack simulation	7:05-7:25 Breakfast 7:25-7:45 Recap previous days' activities and announcements for day Morning sessions: 7:50-8:40 Session 1 8:45-9:35 Session 2 9:45-10:35 Session 3 10:40-11:30 Session 4 11:30-12:15 Lunch and guest speaker Afternoon sessions 12:20-1:00 Session 5 1:05-2:15 Robotics 2:15-2:30 End-of-day wrap up and demos from day	7:05-7:25 Breakfast 7:25-7:45 Recap previous days' activities and announcements for day Morning sessions: 7:50-8:40 Session 1 8:45-9:35 Session 2 9:45-10:35 Session 3 10:40-11:30 Session 4 11:30-12:15 Lunch and guest speaker Afternoon sessions 12:20-1:00 Session 5 1:05-2:15 Robotics 2:15-2:30 End-of-day wrap up and demos from day

**WEEK 2 -- July 18-22 2016**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<p>7:05-7:25 Breakfast            7:25-7:45 Recap previous days' activities and announcements for day            Morning sessions:            7:50-8:40 Session 1            8:45-9:35 Session 2            9:45-10:35 Session 3            10:40-11:30 Session 4            11:30-12:15 Lunch and guest speaker            Afternoon sessions            12:20-1:00 Session 5            1:05-2:15 Robotics            2:15-2:30 End-of-day wrap up and demos from day</p>	<p>7:05-7:25 Breakfast            7:25-7:45 Recap previous days' activities and announcements for day            Morning sessions:            7:50-8:40 Session 1            8:45-9:35 Session 2            9:45-10:35 Session 3            10:40-11:30 Session 4            11:30-12:15 Lunch and guest speaker            Afternoon sessions            12:20-1:00 Session 5            1:05-2:15 Robotics            2:15-2:30 End-of-day wrap up and demos from day</p>	<p>7:05-7:25 Breakfast            7:25-7:45 Recap previous days' activities and announcements for day              Field Trip – NASA Goddard and the application of robots, and cyber applications in space / satellites.</p>	<p>7:05-7:25 Breakfast            7:25-7:45 Recap previous days' activities and announcements for day            Morning sessions:            7:50-8:40 Session 1            8:45-9:35 Session 2            9:45-10:35 Session 3            10:40-11:30 Session 4            11:30-12:15 Lunch and guest speaker            Afternoon sessions            12:20-1:10 Post-test            1:15-2:15 Robotics            2:15-2:30 End-of-day wrap up and demos from day</p>	<p>7:05-7:25 Breakfast            7:25-7:45 Recap previous days' activities and announcements for day              Showcase              Awards</p>

## **Ideas for sessions:**

**The morning sessions will be a rotation between math, science, English, and career counseling. Students will be in groups of 10 and rotate through each session (giving each set of content teachers one session off in the morning)**

### **Topics to cover in morning sessions:**

- 1. Technical writing, current events in Cyber, and debates**
- 2. Electrical fields**
- 3. Binary concept**
- 4. How do people in Cybersecurity field communicate about what is going on?**
- 5. How does data move?**
- 6. Why are people vulnerable to cyber attacks? Why do different operating systems have different vulnerabilities?**
- 7. Cybersecurity is securing the doors in and out of your house, and door watchers have to become more sophisticated to be able to really know what is a threat and what it is not**
- 8. Any attack has to be thought out completely—binary teaches how machines are talking to each other, then you put in the human interface. The weakest part of the system is the person, but they are also the client and intellectual power behind it, so they are also the strongest**
- 9. What is a network? What are different types of networks?**
- 10. To show example of what coding is, ask students to write down everything they think of when they hear “apple;” you have been learning since a little kid everything you are supposed to remember when you hear apple. That is coding, all communication is coding. If you call it apple, you can’t expect them to run orange**
- 11. Coding/programming is reducing a massive amount of instructions to as few instructions as possible**
- 12. Clockwise/counter clockwise, perspective (for robotics)**
- 13. What is changing in the field of cybersecurity/robotics? What are possible careers?**
- 14. Counselor will be pulling students and working them individually based on their grade level and college aspirations.**