

**HARRISONBURG NEXTGEN CYBERCAMP INSTRUCTIONAL ACTIVITY SCHEDULE**

School Division(s): Harrisonburg City (113)

School: Harrisonburg High School

Camp Begin Date: Monday July 11 Camp End Date: Saturday July 23

Days of Week: Monday-Saturday

Daily Instruction Begin Time: 8:00AM Daily Instruction End Time: 2:00/4:00PM

Lunch Period (begin/end): 30 min.

Total instructional hours including guest speaker(s) field trip(s) and culminating activity: 70 Enrollment: 25+

Week 1: July 11-16					
Monday July 11	Tuesday July 12	Wednesday July 13	Thursday July 14	Friday July 15	Saturday July 16
JMU ropes course - teamwork, networking intro	IC3 Living Online pretest Map of cyber attacks Electricity - series and parallel (2 hours) MacGyver Time flashlight (1 hour) LA: 10-word story activity (w/ music) (30 minutes) STEM Explore EDA lesson - Electricity Cyber Society lesson Programming - Sphero - Exploration - Controls and Commands (1 hrs) Guest speaker - James Carter - cleaning up after website hack (1hour)	Chemistry (Explore EDA lesson)(45 minutes) Make the Battery Explore Littlebits (30mins) Design a new flashlight that includes a light sensor or make new invention (logical thinking write) (45 mins) Programming - Sphero - Logic and Joining Commands - First Challenge - Introduce water challenge/group brainstorming (Engineering design process) (2 hrs) LA: Socratic Seminar - The "Internet of Things" article (45 min - 1 hr)	Research on planet characteristics that support life (sci/LA collaboration)(45 mins) Programming - Sphero - Challenge Design - Prototype - Redesign (1.5 hours?) LA: Cyberbullying (4-corners kinesthetic/discussion/writing/RAFT - 1-2 hrs) Guest speaker - Josiah Weaver (also available July 19-22) - career moves/available careers/consulting	Visit to X-Labs (perhaps after Sphero has been introduced) 3d printing Virtual reality environments (morning 8-12:30) Guest speaker - Nathaniel Fairfield - autonomous cars (1hour)  Sphero Water Competition (1 hour)	Programming - Drones - mock planetary fly (1 hour)  Intro Renewable energy house  Design your own experiment to test which material you should use for your house (2 hours)  Research on solar heating a home (LA component) (1 hour)  Guest speaker - Rob Cone on school network administration and security

**Week 2: July 18-23**

<b>Monday July 18 8-4pm this day</b>	<b>Tuesday July 19</b>	<b>Wednesday July 20</b>	<b>Thursday July 21</b>	<b>Friday July 22</b>	<b>Saturday July 23 8-4pm</b>
<p>Downtown walking tour of related sites</p> <p>Axon AI The Hub Cheido Labs Rosetta Stone VGI Possibly Bella Luna</p>	<p>LA: Setting up Public Forum Debate teams/topics (practice giving mini-speeches) (30 minutes)</p> <p>Renewable Energy House (EDA apply Electricity)reflection/angles mini lesson (45 minutes)</p> <p>Brainstorm and draw their home (45 minutes)</p> <p>Programming - BOE Bots - NICERC Robotics 2-4</p> <p>Guest speaker - Brett Tjaden (or available July 20) - Cyber Defense at JMU</p>	<p>LA: Research/Writing of debate cases (1 hour)</p> <p>Renewable Energy House (begin build 2 hours)</p> <p>Programming - BOE Bots - NICERC Robotics 10, 11, (30 minutes)</p> <p>Guest Speaker: Margie Wolchak (cybersecurity) 1 hour</p>	<p>Learn the probeware (Brittany's ideas) (30 minutes)</p> <p>LA: Practice Debate Rounds (1 hour)</p> <p>Renewable Energy House (continue build 2 hours)</p> <p>Programming - BOE Bots - NICERC Robotics 14, 15 (30 minutes?)</p> <p>Speaker 1 hour</p>	<p>LA: Public Forum debates (in auditorium) 2hours?)</p> <p>Energy House test with probes (finish build and test 2 hours)</p> <p>Programming - BOE Bot test day (1hour?)</p>	<p>Finish projects/redesign house</p> <p>IC3 Living Online post-test</p> <p>Prepare final celebration Final celebration (1-4pm)</p>