Commissioner's Cache

Big news! The Elementary School Cyber Education Initiative (ESCEI) is here! Rolled out on July 31, ESCEI (pronounced "Ess-key") is another addition to the CyberPatriot program. Through the great support of our sponsors, educators, parents, AFA volunteers, and others, CyberPatriot now offers cyber education opportunities from elementary school to middle school and to high school. Be sure to read our article in this edition of the CyberSentinel for more information on ESCEI!

July was a great month. It began with AFA CyberCamps across the country (including one taught by the CyberPatriot staff at the Facebook campus in California!). And the Exhibition Round provided another opportunity for your teams to recruit members and hone cyber defense skills. August will be another fun month with more AFA Cyber-Camps and still another Exhibition Round.

Summer vacation is coming to an end and we are gearing up for a great competition season. Our Presenting Sponsor, Northrop Grumman Foundation, and the rest of our generous sponsors are working with us to make this your best season yet!

Enjoy the rest of your summer. See you in September!

Bernard K. Skoch

Bernard K. Skoch | National Commissioner

DATES TO KNOW

AUG. 11	Coaches Meeting
AUG. 11-21	Exhibition Round #5
OCT. 9	Team Creation Deadline
OCT. 13-27	CP-VII Official Practice Round
NOV. 6	Student Registration Deadline

39

The number of CyberPatriot competitors hired as interns at Northrop Grumman this summer!

Elementary School Cyber Education Initiative Now Available!

CyberPatriot is pleased to announce the launch of the newest component of the National Youth Cyber Education Program: The Elementary School Cyber Education Initiative (ESCEI). This initiative now allows the program to reach many more students by exciting K-sixth-graders about cybersecurity and other science, technology, engineering, and mathematics disciplines. Like the National Youth Cyber Defense Competition and AFA CyberCamps, the initiative aims to teach these students the cybersecurity skills they need to keep them safe online in their everyday lives.

The best part is, participation in the initiative is completely free!

The Elementary School Cyber Education Initiative is not a competition. Rather, it is a kit of three fun, interactive learning modules that teach elementary school students basic cyber safety and cybersecurity concepts in an engaging way.

The first module, "Security Showdown," introduces to K-third-graders the appropriate ways of behaving online and gives them a chance to practice their newly acquired cybersecurity knowledge. The second and third modules, "Clean_Up" and "DangerBots" build on these principles for fourth-sixth-graders and increase students' awareness of important computer terminology and more advanced cyber threats.

Each kit also contains curriculum to supplement the modules, information about the initiative for parents and educators, and tools to help those who order the kit promote the program. The kit is available as a digital download after individuals fill out a short form on the CyberPatriot website. Individuals may also request a hardcopy of the materials, which includes a DVD of all the materials and a hard copy of the instructor's guide and brochure.

To access the Elementary School Cyber Education kit, go to www.uscyberpatriot.org and access the Elementary School Cyber Education Initiative option underneath Special Initiatives on the top of the page.

CyberPatriot welcomes and appreciates all feedback on the ESCEI, as it will help improve the interactive learning modules and other materials for the second iteration of the initiative. A feedback form is also available on the ESCEI page of www.uscyberpatriot.org.

NGC TAKES CYBERPATRIOT TO SAUDI ARABIA 'CYBERARABIA', INSPIRES STUDENTS TOWARD CAREERS IN CYBERSECURITY BY MARYNOELE BENSON, NORTHROP GRUMMAN

This spring, Northrop Grumman and AFA took CyberPatriot on the road to Riyadh, Saudi Arabia, for a two-day cybersecurity awareness and training session for students at King Saud University. Called "CyberArabia," the purpose of the event, held April 28 - 29, was to build interest and excitement for this critical career field.

During the hands-on instruction portion of the workshop, students followed along in a simulated Windows system as instructors demonstrated important cybersecurity principles such as encryption and account management and security tools like firewalls and anti-malware. Each afternoon, students broke into teams and put their newly acquired skills to the test, competing head-on in a cyber defense competition fashioned after the CyberPatriot program. Members of the top team from each day's competitions received a CyberArabia Champion trophy.

"Our workshop offered students a chance to learn about cyber defense as well as the amazing career opportunities available in cybersecurity," said Diane Miller, director of CyberPatriot Programs for Northrop Grumman and the company's director, InfoSec Operations and Cyber Initiatives. "Our partnership with King Saud University facilitated a critical transfer of knowledge about cyber defense training and awareness that will help students build the skills needed to thrive in this field."

This event came on the heels of CyberCenturion, the UK version of CyberPatriot, which held its finals competition on April 17 at Bletchley Park in the UK. Northrop Grumman partnered with Cyber Security Challenge UK in August 2014 to launch the competition, which it renewed for 2016. CyberArabia and CyberCenturion are examples of the global expansion CyberPatriot has experienced over the past two years.

CyberPatriot Instructors Lead AFA CyberCamps at Facebook and TWU

CyberPatriot Program Staff Leslie Walczak and Ryne Smith recently spent two weeks on the road teaching AFA CyberCamps.

The pair first taught a group of 35 fifth-eighth-grade girls at Cyber Gold Sponsor Facebook's campus in Menlo Park, Calif. During the camp, which ran July 6-10, 2015, Ryne and Leslie introduced the students to cyber safety, cyber ethics, and Windows and Ubuntu security best practices. The week culminated in an exciting mock CyberPatriot competition that put the cyber skills the girls had learned to the test. In addition to recognizing the competition's top teams, Facebook generously awarded new HP laptops to all 35 participants in order to encourage them to continue to pursue careers in cybersecurity and other STEM fields.

From Menlo Park, Ryne and Leslie flew to Denton, Texas, to teach a camp hosted by CyberPatriot partner organization, Texas Woman's University (TWU). TWU hosted the first-ever AFA CyberCamp pilot in 2014 and remains committed to encouraging students in North Texas, and particularly girls, to pursue careers and higher education in computer science. This summer, the university invited nearly 20 local high school students to attend its AFA CyberCamp, featuring guest speakers, a campus tour, and a tour of the university's networking facilities.
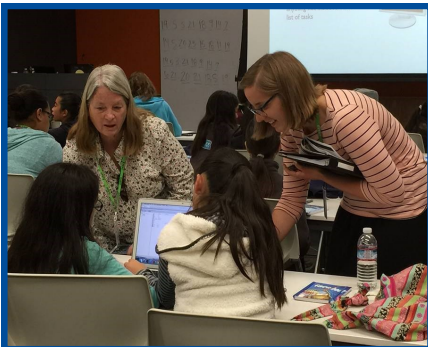
Ryne and Leslie used the Standard AFA CyberCamp Kit software and curriculum to execute the Facebook and TWU camps. The same Standard AFA CyberCamp Kit will be used by local instructors at 22 schools and organizations participating in the inaugural AFA CyberCamp season this summer.

STEMspark
East Tennessee Innovation Hub
is the newest Center of Excellence. Learn more about them here!

(Official Press Release)

Coaches' Corner

- **Online Coaches and Mentors Meetings.** The Coaches Meetings are a great time to ask any questions about CP-VIII! The format has changed to an interactive chat session until later in the season. Information on joining these meetings will be emailed to Coaches a few days before the meeting. Additional questions can be directed to info@uscyberpatriot.org.
    Next Meeting: Aug. 11, 9 a.m. - 5 p.m. ET

- **Exhibition Rounds.** The purpose of the Exhibition Rounds is for Coaches to recruit team members and orient potential CyberPatriot supporters. Only registered Coaches may participate in the Exhibition Rounds. Competitors do not have to be registered. Coaches must control the images as they would in Competition Rounds. This is the last Exhibition Round before the office CP-VIII Practice Round in October.
    - August Exhibition Round: Aug. 11-21

- **Training Materials.** Registered Coaches and Mentors may access exclusive training materials at the Dashboard on the CyberPatriot website. Just click on SIGN IN and enter your login and password to access the Dashboard.

SPOTLIGHT: A CLOSER LOOK AT CYBERCENTURION

CyberCenturion Account
By Leah Wild, CyberCenturion Finalist

On the morning of April 17, busloads of excited students rocked up to the final challenge of the Cyber Centurion competition. The teams were abuzz as they arrived at The National Museum of Computing, taking the opportunity to meet honored guests, who arrived to witness our brightest youngsters taking their first steps into the world of cyber.

Competitors were treated to a visit to WITCH: the oldest original computer in the world and, after some inspirational speeches, began the first session. Students' skills were put to the test as they worked on various images, attempting to harden systems and keep them safe from potential attacks.

Points were gained for removing harmful software and closing weaknesses in the system's defense, doing things like adding passwords and altering user permissions. The objective was to ensure that the systems were as secure as possible, minimizing the threat from malicious parties.

While the teams worked away, the scoreboard was hidden in the last hour, leaving the winners in suspense until the final moments.

Following the end of the competition, the students embarked on a tour of Bletchley Park, the birthplace of British computing. Seventy years ago, this was where hundreds of brilliant young minds embarked on a similar journey, helping to keep their country safe, utilizing cutting-edge technology, which gave the CyberCenturion event a moment of perspective.

Finally, it was time for the results. Awards were given for individual leadership, and then the winning team was announced: KEGS Young Engineers Club. The winners were awarded the unique prize of valves from the Colossus itself, regarded as the world's first computer.

Looking forward, next year's focus is to expand successful elements and focus on improving the "two Gs": "Growth and girls," as @Cyberchallenge puts it. Competitions like this are vital to ensure the growth of one of the most diverse and multifaceted industries in Britain. The competition was a triumph, and there can be no doubt that the CyberCenturions of today will develop into the cyber sentinels of our future.

Article by KEGS Sixth, Winning UK Team

On the 17th of April 2015, two teams from the KEGS Young Engineers Club - one team of year 11s comprising Ollie Barnard, Rohan Bungre, Anurag Sahare, Prakash Singh, and David Suriyaarachchi and one team of sixth-formers made up of Nicholas Sale, Babalola Ajose, Laurence Watts, Scott McQuarrie, and Ryan Griffiths - set out early in the morning en route to the prestigious location at The National Museum of Computing at historical Bletchley Park to take part in the first CyberCenturion National Finals in the UK.

The competition is modeled on CyberPatriot which has been running for eight years in the United States, created by the Air Force Association. Due to its success, AFA and its Presenting Sponsor, the Northrop Grumman Foundation, decided to expand to the UK as CyberCenturion, using the CyberPatriot Competition System, which allows both the UK and US to have their virtual competition rounds running simultaneously. CyberCenturion is open to any groups aged between 12 and 18 years old and each group can have more than one team.

This is the story of the UK's first CyberCenturion National Finals champions in their own words:

The lead up to the finals consisted of two practice rounds in which the teams got to grips with the focus of the competition - securing operating systems such as Linux and Windows 7 running on "virtual machines" and gaining or losing points depending on whether they fix security issues or create them. With the teams having oriented themselves during these two practice rounds, they had to compete in a further two six-hour rounds. KEGS Sixth won the first round with Matrix Mk II coming second, and in round two, both teams were moved one place down as another school took the lead.

Having arrived at TNMOC, we gathered in a room at the Museum of Computing - the hosts of the competition - and waited with the six other finalist teams for the organizers to lead us off to the competition rooms. After a short time and a speech before the world's first decimal computer - the Harwell Dekatron or WITCH - we were led
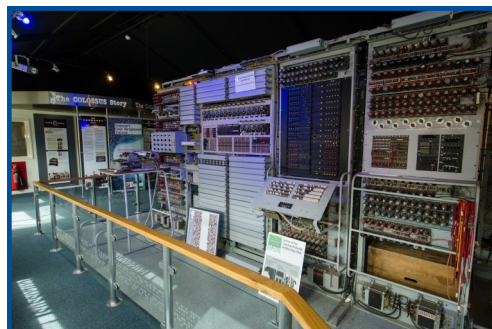
away to the competition rooms where we discovered that we had not only five operating systems to fix but only four hours in which to do this - again a step up in difficulty. However both teams were confident, as early on KEGS Sixth were again in first place with Matrix Mk II in third. However, by lunch time, the other teams had caught up and KEGS Sixth was no longer in frist place. After eating, we were given a fascinating tour of the Museum of Computing, seeing some of the earliest computers and their evolution through the years.

CyberCenturion
Student Testimonials

"I am now considering a career in cybersecurity." - Laurence Watts, winner (Year 12 KEGS Young Engineers Club)

"I learned much about the intricacies of cybersecurity, which I had not even considered before. Now I need to use these to protect my computer." - Ryan Griffiths, winner (Year 12 KEGS Young Engineers Club)

"I was able have the experience of being a system administrator and learn the true value and how much of an issue cybersecurity is. I am considering a career in the field now." - David Suriyaarachchi , finalist (Year 11 KEGS Young Engineers Club)

"I thoroughly enjoyed the day. Especially since it was the first time the competition ran, it was incredibly well run. I definitely recommend to anyone who even has a slight interest in computers, and I'm looking forward to doing it again next year with our more experienced team." - Anurag Sahare, finalist (Year 11 KEGS Young Engineers Club)

PATCHES FOR SALE!

The official CyberPatriot patch is still available for purchase.

Click here for details.

This Month In Cyber History

Aug. 15, 1994 — Believe it or not, computers didn't always come with web browsers. On Aug. 15, 1994, Microsoft Corp. decided to work to incorporate an Internet browser into its upcoming Windows 95 operating system in an effort to catch up to the Internet bandwagon it had missed. Windows 95 programmer Benjamin Slivka sent an email to his coworkers suggesting a World Wide Web browser as a feature for Windows 95. Microsoft has faced legal challenges for the way it bundled the result of the project - Internet Explorer - with Windows software.

For more information, visit:
http://www.computerhistory.org/tdih/August/15

CyberCenturion (cont'd)

Then, immediately back into the action, both teams worked hard to try and gain the lead, but for the most part, they struck a wall of difficulty. Soon, point scoring became scarce throughout each room as all teams searched for the most intricate and hidden security issues, as well as the answers to the tough forensic questions. With the scoreboard shut down and an hour or so to go, neither KEGS team was in the leading position. After that end of the final, we were given another tour, this time of Bletchley Park itself; we saw some of the buildings in which code breakers and interceptors worked and learned much about the history and importance of the site.

Finally, surrounded by cameras and in front of the world's first electronic computer - the Colossus - the results were announced. The scores were very close, but KEGS Sixth managed to steal away first place with Matrix Mk II also doing extremely well. Each member of the winning team took away an original valve from the Colossus computer itself, the school a set of blueprints for the computer, and all received a certificate of participation. Both teams were overjoyed with a great result at the end of an exciting day.

For more information about CyberCenturion, visit http://cybersecuritychallenge.org.uk/competitors/cybercenturion/