



AFA CYBERCAMPS

SUMMER 2022 REPORT

CYBERPATRIOT
National Youth Cyber Education Program



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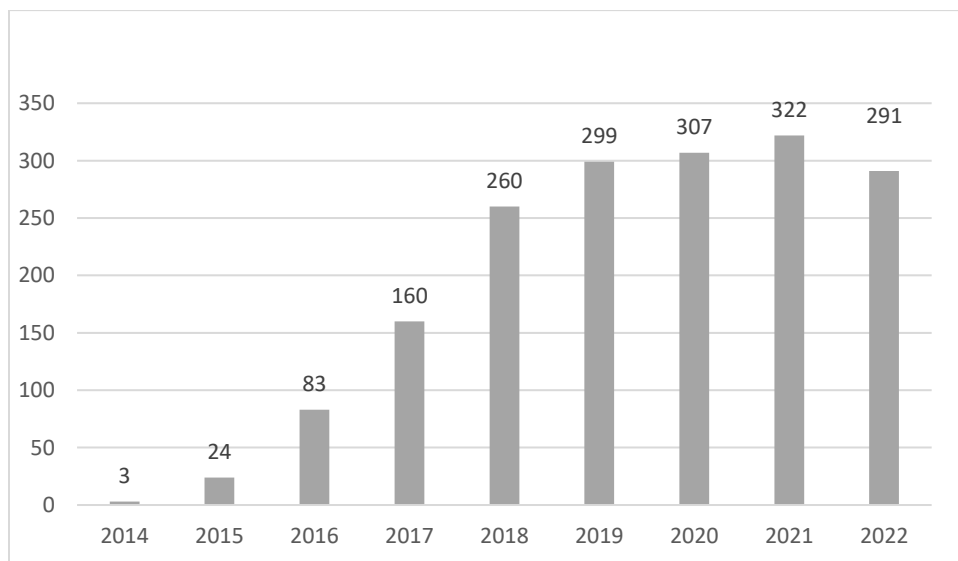
Purpose

This report synthesizes the summer 2022 season of AFA CyberCamps. It provides camp participant demographics, effectiveness, and quality as reported in post-camp surveys of participants and instructors.

This report also tabulates recommendations for improvement received from participants and instructors. Each of these recommendations will be evaluated by AFA's CyberPatriot Program Office for possible incorporation into future CyberCamp seasons.

AFA CyberCamps

Since 2014, the newly renamed non-profit Air & Space Forces Association (formerly the Air Force Association), through their CyberPatriot program has offered curriculum for week-long CyberCamps. The CyberPatriot program is part of AFA's mission to educate the public on the need for STEM education for a technically superior and professional workforce to ensure national security. From a modest pilot program of just three locations in 2014, the program had over 290 registered camps in 2022. Registration declined slightly in 2022 from previous seasons due to several camp hosts being unable to host camps this season. We are working diligently to create strategies to increase camp participation for the summer of 2023.



2022 Camp Highlights

To collect data on the 2022 CyberCamps, student participants were asked to complete pre- and post-camp surveys. Instructors were asked to complete a post-camp survey only. Completion of the surveys was strongly encouraged, but not required.

Standard Camps:

Standard camps are designed to provide introductory cybersecurity skills to students with little or no prior cybersecurity training. Any student with even the slightest interest in computers can successfully attend a Standard Camp. In 2022, 197 Standard Camps were hosted across the country.

- 6% of camps were held virtually
- 26% female participation
- 95% of instructors rated the camp “Effective” or “Very Effective.”
- 99% of instructors indicated they would likely recommend AFA CyberCamps to a colleague (or host another camp)
- 94% of students rated their camp experience as “Good” or “Excellent”
- Student knowledge increased at least one full point across all topics covered during the week

Advanced Camps:

Advanced camps are designed to build on the skills learned in a prior standard camp or to further develop skills learned from participation in CyberPatriot’s National Youth Cyber Defense Competition. Students are expected to have a basic background in cybersecurity in order to successfully complete an Advanced Camp. In 2022, 94 Advanced Camps were hosted across the country with an estimated 15% of camps being held virtually. Based on the feedback received:

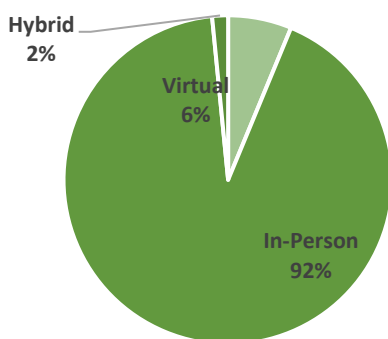
- 15% of camps were held virtually
- 21% female participation
- 75% of instructors rated the camp “Effective” or “Very Effective.”
- 85% of instructors indicated they would likely recommend AFA CyberCamps to a colleague (or host another camp)
- 93% of students rated their camp experience as “Good” to “Excellent”
- Student knowledge on average, increased one full point across all topics covered during the week

Standard Camps

Camp Demographics

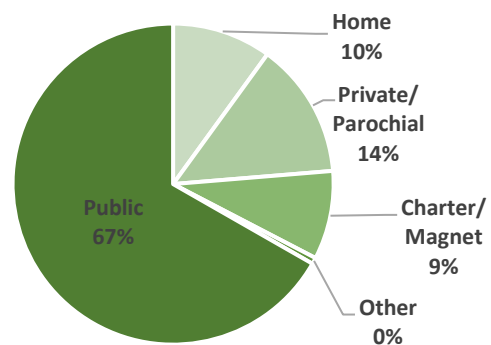
Camp Type

Nearly all camps in 2022 were held in-person with just 6% being held virtually and 2% held as a hybrid.



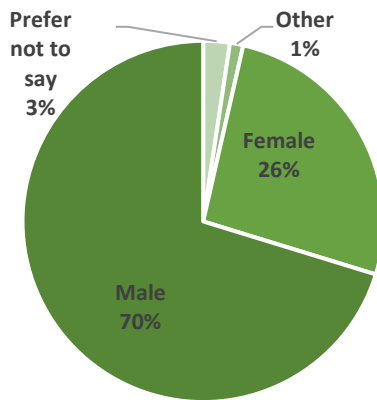
School Type of Attendees

Of the 1,429 student respondents, 67% of standard camp attendees are enrolled in public schools.



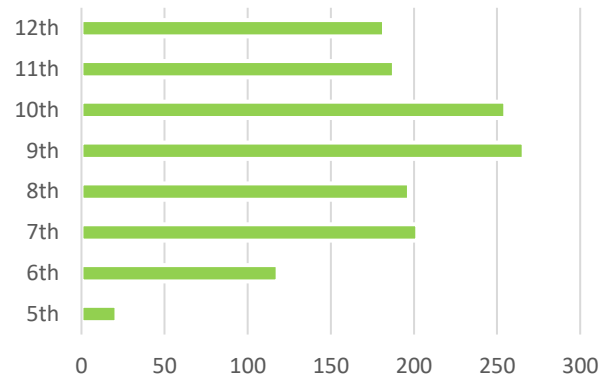
Gender

Of the 1,429 student respondents, 374 of the participants designated themselves as female.



Grade / Age

Of the 1,429 student respondents, 26% are students in 6th, 7th, or 8th grade. Most participants in 9th grade.

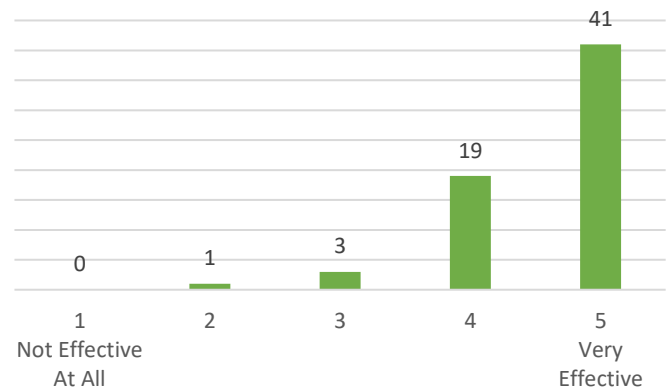


Camp Effectiveness

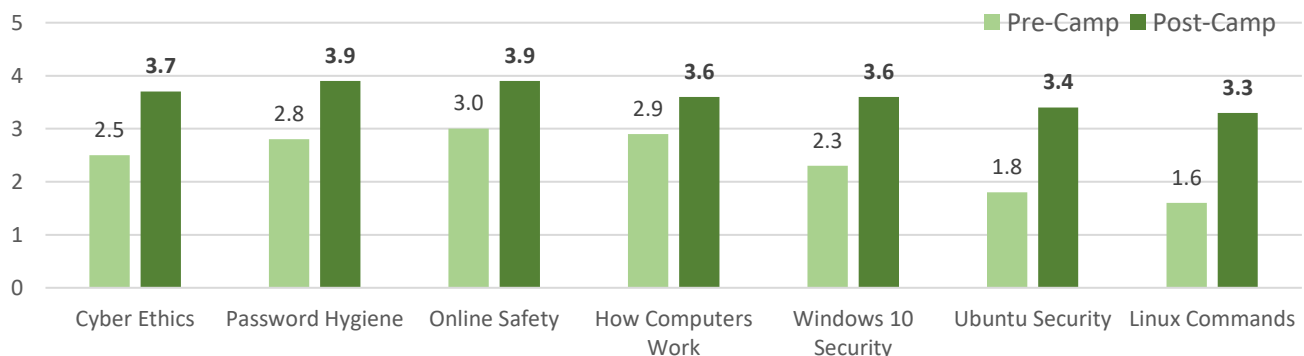
Knowledge Improvement Assessment

To measure the educational effectiveness of the camp, we asked the instructors, “Overall, how would you rate the effectiveness of this camp in improving students' knowledge of cybersecurity?” Students were asked to rate the effectiveness from “Not Effective at All” to “Very Effective.”

Of the 64 instructor respondents, 94% rated the camp “Effective” or “Very Effective.”



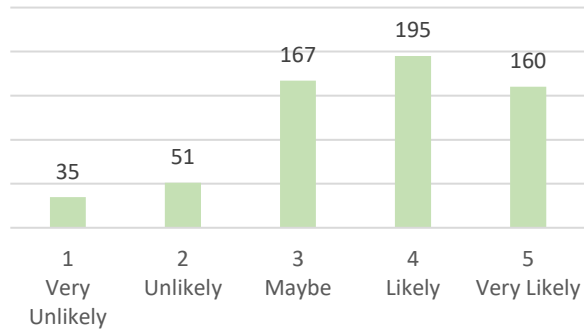
Both before and after the camp, students were asked to rate their knowledge of specific topics on a scale of 1-5, with a rating of 5 being “Expert Knowledge” and a rating of 1 being “No Knowledge.” Most pre-and post-camp knowledge ratings show at least a full point increase in knowledge across every topic after completing the camp.



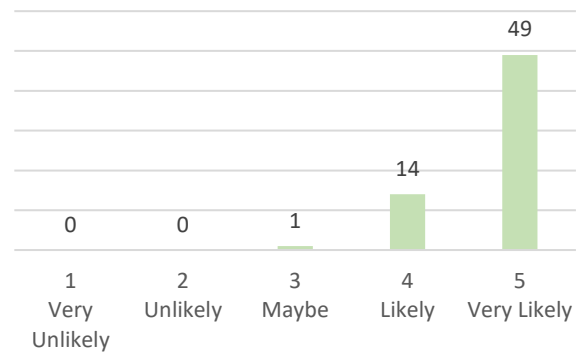
General Camp Ratings

To measure the overall camp experience, students (608 respondents) and instructors (64 respondents) were asked how likely they would be to recommend an AFA CyberCamp to a friend or colleague. In total:

86% of students would recommend to a friend

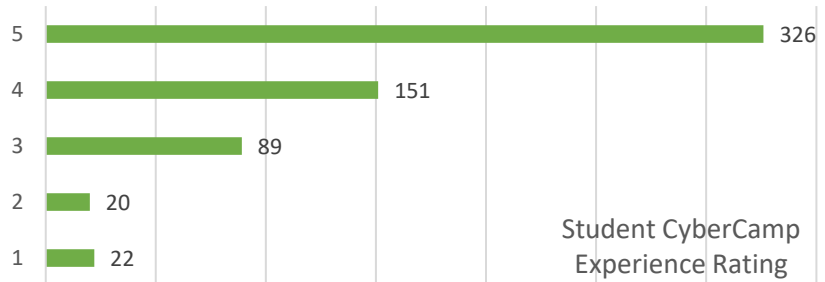


99% of instructors would recommend to a colleague



In total, 93% of student respondents gave “Excellent” to “Good” ratings to their camp experience.

(1=Very Poor, 5=Excellent)



Takeaways – Comments

Camper Comments

“Thank you for the experience and knowledge!”

“I think that this was a great experience and I enjoyed it very much. Thank you!”

“I love this camp thanks for teaching me this!”

“I really liked your camp, it was super fun!:)”

“This camp was awesome and I had a fun time. The competition stuff was really fun. I like doing competitive projects like that.”

“I think it was a great intro into the cyber security world.”

Instructor Comments

“The curriculum was very informative without being too complicated. I enjoyed the hands-on portions to get the students engaged and the instructor guides were very helpful.”

“The teamwork that these young teen girls showed was amazing. The knowledge they gained will stay with them forever. Great experience.”

"The teamwork that these young teen girls showed was amazing. The knowledge they gained will stay with them forever. Great experience."

"Thank you very much for an outstanding Cyber Camp experience. All of the course materials were "top shelf." The students had a great time and learned a lot."

"Great camp. We look forward to building upon the camp to create a cybersecurity program at our nonprofit."

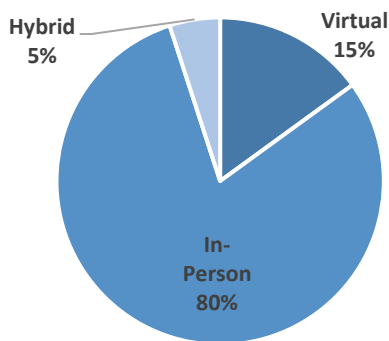
"Good experience for all."

Advanced Camps

Camp Demographics

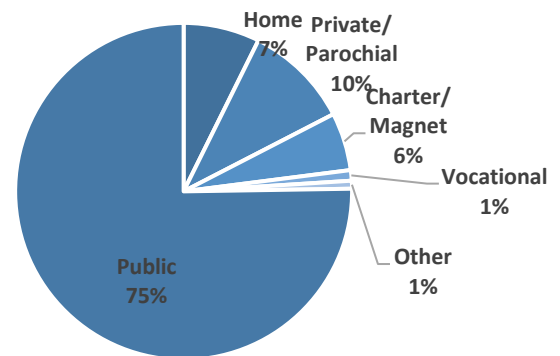
Camp Type

The majority of camps were held in-person. (20 instructor respondents) with one hybrid and 3 virtual



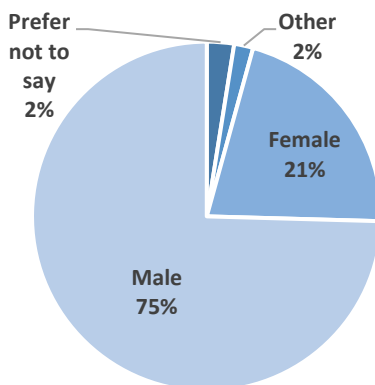
Type of School Attendees

Of the 397 student respondents, 75% of advanced camp attendees are enrolled in public schools.



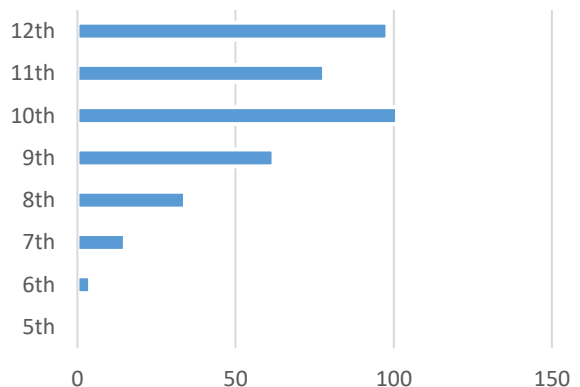
Gender

Of the 397 student respondents, 21% of the participants are female.



Grade / Age

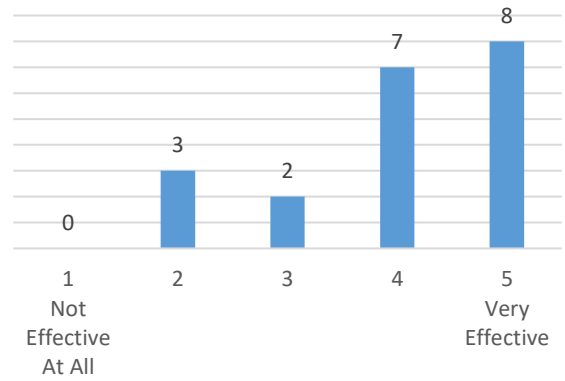
Of the student respondents, 86% are high school students (grades 9-12).



Camp Effectiveness

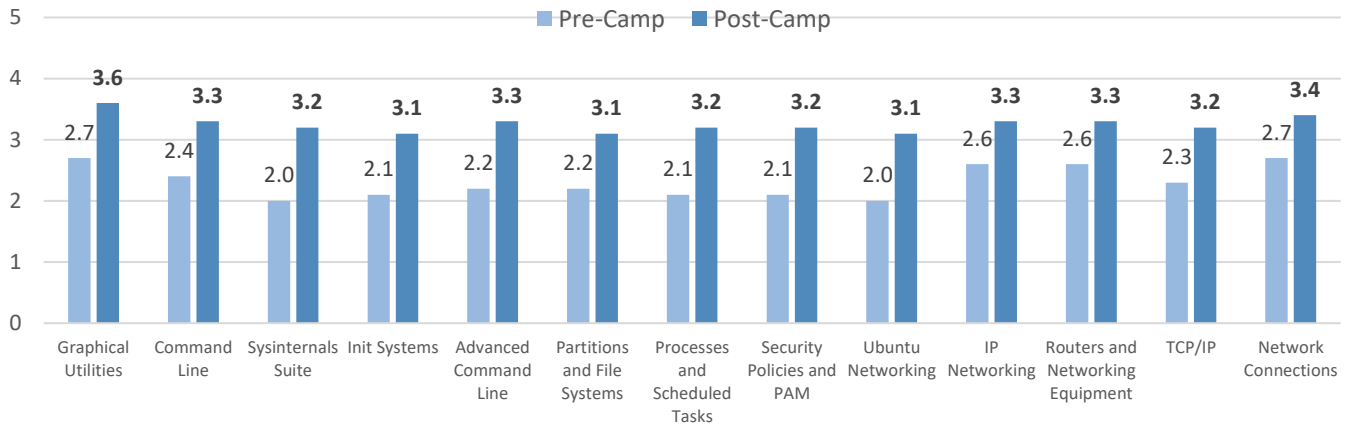
Knowledge Improvement Assessment

To measure the educational effectiveness of the camp, we asked the instructors, “Overall, how would you rate the effectiveness of this camp in improving students' knowledge of cybersecurity?” They rated on a scale of 1-5, with a rating of 1 being “Not Effective at All” and a rating of 5 being “Very Effective.”



Of the 20 instructor respondents, 75% rated the camp “Effective” or “Very Effective.”

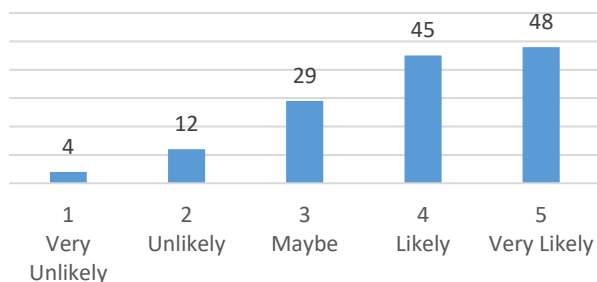
Both before and after the camp, students were asked to rate their knowledge of specific topics on a scale of 1-5, with a rating of 5 being “Expert Knowledge” and 1 being “No Knowledge”. The average pre-and post-camp knowledge ratings show a full point increase in knowledge across nearly every topic after completing the camp.



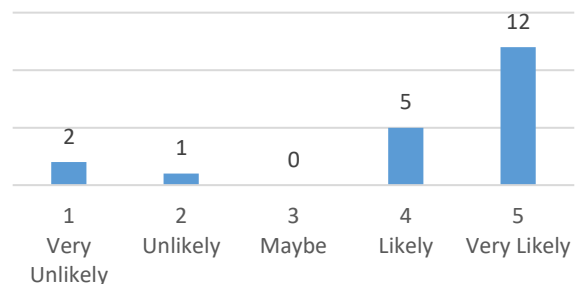
General Camp Ratings

To measure the overall camp experience, students (138 respondents) and instructors (20 respondents) were asked how likely they would be to you recommend an AFA CyberCamp to a friend or colleague. In total:

88% of students would recommend to a friend

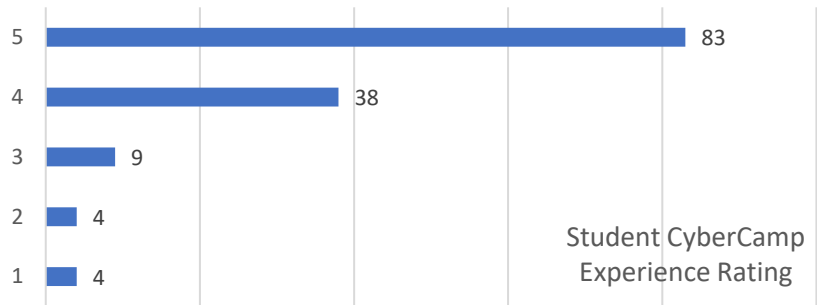


85% of instructors would recommend to a colleague



In total, 94% of student respondents gave “Excellent” to “Good” ratings to their camp experience.

(5=Excellent, 1=Very Poor)



Takeaways – Comments

Camper Comments

“It was very fun and interesting to learn about”

“I would say that the overall program was very interactive and was a fun experience for me to learn in.”

“I loved that it was a challenge.”

“I had a great time and can't wait to do more in cybersecurity!”

Instructor Comments

“Overall, the students learned a lot from the CyberCamp curriculum.”

“The CISCO slides were excellent.”

“Helene and the customer support team were an excellent resource. The response time and helpfulness was really appreciated.”



**CyberPatriot is a STEM program of
the Air & Space Forces Association.
For additional information, visit
www.uscyberpatriot.org**