



Classification

CyberStart Program



Leaders for Life



“Motivating Young People to be Better Citizens”

This We'll Defend

Classification



CyberStart Program



Leaders for Life

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“Motivating Young People to be Better Citizens”



JROTC Cyber Programs



Curricular

- Cyber.org
- Cyber Pilot - HQ Army initiative designed to enhance a traditional JROTC programs ability to provide cyber related education, skills, and honors credits in cyber/IT. This program is in the planning/preparation phase and is scheduled to start school year 2022-2023.

Co-curricular

- Cyber Patriot-premier national high school cyber defense competition designed to excite, educate and motivate the next generation of cyber defenders critical to our national security.
- CyberStart- Free program for all JROTC Cadets that enhances cybersecurity skills and results in an industry recognized certification in cybersecurity.





What is CyberStart America?



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CyberStart America is a program that aims to inspire every **high school student** in the US to give cybersecurity a try.

By providing free access to an immersive, gamified learning platform (CyberStart), CyberStart America will motivate high school students to explore and consider the exciting opportunities cybersecurity has to offer.

For those who show an interest and talent, top performers may qualify for industry training and certification!



JROTC Mission



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- Enable a large numbers of JROTC Cadets to **discover they have (1) an aptitude to excel in cybersecurity and (2) an interest in cybersecurity careers.** •Enable Cadets to **gain skills in cybersecurity and information technology fundamentals** that will be valuable in any tech career.
- Empower top performing Cadets to complete **industry-level training and pursue a professional-level, accredited industry certification** from SANS GIAC.
- Program components include the following:
 - **Phase 1:** CyberStart Game (ongoing, open to all cadets)
 - **Phase 2:** Cyber Foundations training (selected cadets)
 - SANS SEC275: Foundations Training Level 1 (25 online modules)
 - SANS SEC275: Foundations Training Level 2 (22 online modules)
 - SANS SEC275: Foundations Training Level 3 (18 online modules)
 - SANS SEC275 Foundations Training Level 4 (Review all modules, books, & pursue GIAC Certification)

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Web links



YouTube link

- <https://www.youtube.com/playlist?list=PLTtLhu2y2vFQR9VgQZntdYKrl5ap2G1Dc>
 - CyberStart America Registration
 - SANS Foundations Platform Tour
 - CyberStart Platform Tour
 - SANS Foundations Registration

Vimeo

- <https://vimeo.com/showcase/10536537>
 - CyberStart America Registration
 - SANS Foundations Platform Tour
 - CyberStart Platform Tour
 - SANS Foundations Registration



Foundations Training



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- 65 total modules across 13 learning objective areas
- Hands-on interactive labs platform (60+ labs)
- Engaging 4K video content and audio files
- Quizzes to measure learning outcomes
- Training by world-renowned experts
- Preparation for GFACT Certification



CyberStart Foundations

*Leaders for Life*

Foundations Training Unit 1

- Introduction
- Computer Components & Concepts
- OS and Virtualization
- Linux
- The Web
- Networking Fundamentals
- Windows Foundations

Foundations Training Unit 2

- Servers & Services
- Advanced Computer Hardware
- Practical Programming & Concepts
- SQL Structured Query Language, is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS).





CyberStart Foundations



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Foundations Training Unit 3

- Security Concepts
- Offensive Security Concepts
- Network and Computer Infiltration
- Further Study



Foundations Training Unit 4

- Receive hard copy course materials for all Units 1-3
- Review all content from Units 1-3 (online content, videos, audio files, labs)
- Study for GFACT certification exam
- Complete two GFACT practice exams
- Webinar session on best practices for GIAC certification preparation from SANS subject matter expert
- Attempt proctored GFACT certification exam

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CyberStart Program Management



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The JROTC HQ will lead the planning and execution of the JROTC CyberStart Program.

SANS provides reporting tools whereby Army JROTC leadership can review Cadets' progress and results.

SANS helpdesk is available for technical questions at Phone: 301-654-SANS (7267) or e-mail info@sans.org, Mon-Fri: 9am-8pm ET (phone/email), Sat-Sun: 9am-5pm ET (email only).

JROTC HQ manages license code distribution (Mr. Daniel Pfaff). Licenses will be issued bi-weekly unless notified sooner.

BDE's/DAI's are responsible for ensuring that all Army JROTC Instructors are informed of the CyberStart program and encourage max participation. BDE's also assist the JROTC HQ with the distribution and reconcile of Foundations license codes.

Army JROTC Instructors are responsible for ensuring every Cadet is made aware of the CyberStart program, encourage students to enroll in the CyberStart Game and track Cadet's progress and request new license codes when applicable.



The Mission:



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- To send as many cadets as possible to register at
- www.cyberstartamerica.org/jrotc
- Registering is simple!



Why should cadets care?



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- Learn practical skills through fun, gamified challenges!
- Top performers in CyberStart may be invited to enroll in cybersecurity training via SANS Foundations.
- Pursue a SANS GIAC Certification!
- Same SANS training and GIAC certification used by large Government agencies, Fortune 100 companies, and degree programs for real-world cybersecurity professionals.

CyberStart: Launching Careers

Emma Brun

- Awarded scholarship to SANS course.
- Achieved GIAC certification.
- Now a full-time SOC Analyst in Ohio.





Reporting



Leaders for Life

The SANS and CyberStart teams send weekly reports to Cadet Command, which will be distributed to Brigades.

- Weeks 1 and 3 – CyberStart progress report (identifying cadets for progression to SANS Foundations Level 1)
- Weeks 2 and 4 – SANS Foundations progress report (showing progress through the levels of SANS Foundations and the GIAC certification)

These emailed reports are the definitive way to monitor cadet progress each month – you do not need to monitor a dashboard.



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CyberStart Game

Total Cadets – 275,815 (+1,563) *Population report
 28 June 23 JUMS is currently down. No changes to Population Report

➤ **Total CyberStart Game enrollment = 3,133 Cadets -13**
 = **1.138%** of total JROTC Cadet population enrolled in
 CyberStart Game

➤ 2nd BDE = 170 Cadets **+0** = 1.01%

➤ 3rd BDE = 55 Cadets **+0** = 0.36%

➤ 4th BDE = 857 Cadets **-4** = 1.84%

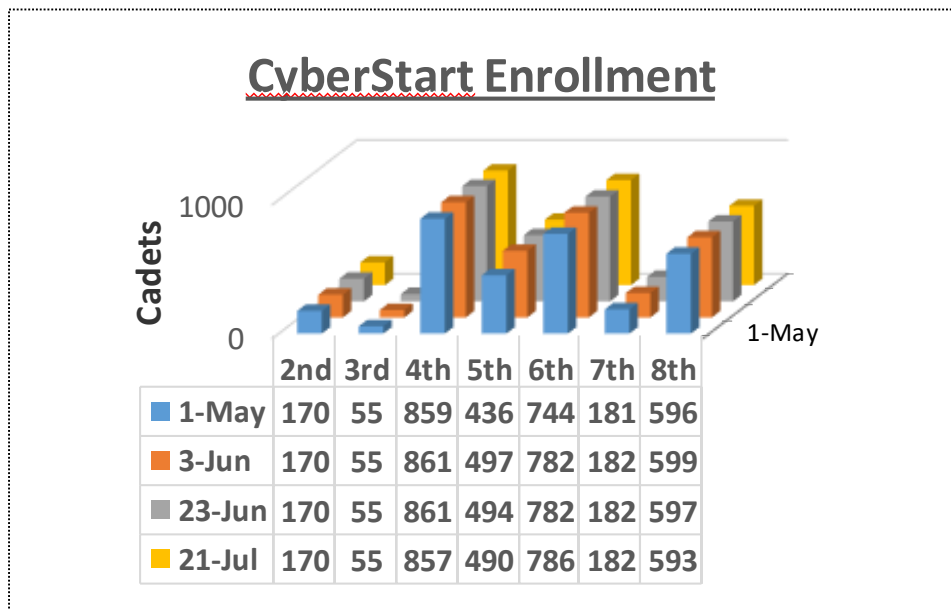
➤ 5th BDE = 490 Cadets **-4** = 1.02%

➤ 6th BDE = 786 Cadets **+4** = 0.81%

➤ 7th BDE = 182 Cadets **+0** = 0.76%

➤ 8th BDE = 593 Cadets **-4** = 2.35%

***% Based on BDE population NOT total population**



*Up-dated 21 July 2023



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CyberStart Foundations



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Foundations Level(s) 1-4

| Unit | Enrolled | | Active ^{*1} | |
|----------------------|----------|-----|----------------------|----|
| JROTC | 272 | +12 | 112 | +4 |
| 2d BDE | 3 | +0 | 3 | +0 |
| 3d BDE | 15 | +0 | 12 | +0 |
| 4th BDE | 56 | +2 | 21 | +2 |
| 5th BDE ¹ | 13 | +5 | 6 | +0 |
| 6th BDE | 145 | -3 | 63 | +1 |
| 7th BDE | 8 | +7 | 1 | +0 |
| 8th BDE | 32 | +1 | 6 | +1 |
| | | | | |

Notes:

1. Active = Last access date Aug 2022 or later
2. Awaiting BDE information from SANS/BDE's



Up-dated 23 May 2023



CyberStart Foundations



Leaders for Life

Foundations Level(s) 1-4

| Unit | Enrolled | | Active ^{*1} | |
|----------------------|----------|-----|----------------------|----|
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| 2d BDE | 3 | +0 | 3 | +0 |
| 3d BDE | 15 | +0 | 12 | +0 |
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| 7th BDE | 8 | +7 | 1 | +0 |
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| | | | | |

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Up-dated 23 May 2023



Getting started / continuing from last school year

Classification



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www.cyberstartamerica.org/jrotc



Alan Paller Memorial Scholarship Fund created by NCSF's Board of Directors

CSA

Home Community Educators Leaderboards Sign in to CyberStart

Cyber warfare is one of the biggest threats our nation faces. Could you discover your talent, advance your skills and win scholarships as a digital soldier?

Enjoy free access to CyberStart; a beginner-friendly, cybersecurity training game where you'll test your out of the box thinking with mind-stretching ethical hacking games!

Register now

Click here to register for school year 2022-23 (even if you already have a CyberStart account)





How do cadets sign up?

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US Army JROTC CyberStart Program_29Sept2022.pdf - Adobe Acrobat Pro (32-bit)

File Edit View E-Sign Window Help

Home Tools SansxCS-Educators... USA_CSAJROTC-Fly... US Army JROTC Cy... US Army JROTC Cy... x

File Edit View E-Sign Window Help

11 / 18 110%

How do cadets sign up?

Go to <https://www.cyberstartamerica.org/jrotc/>



- ▶ All US Army JROTC cadets have free access to the CyberStart game through CyberStart America.
- ▶ Cadets can play CyberStart at any time, including this summer!



JROTC Students JROTC Instructor

JROTC Student Registration

Personal details

First name * Last name *

Email address * Confirm email address *

Tip: Personal email addresses usually work better. Our emails can sometimes get blocked by school systems.

register.cyberstartamerica.org/jrotc-student/

Grade *

Additional information

Gender *

Ethnicity * Race *

Are you part of JROTC/CAP? *

Which service? *

By identifying yourself as a JROTC cadet, your registration information and program progress will be shared with the U.S. Department of Defense for the purposes of identifying students for further training opportunities.

Which brigade/region? *



Completing the registration form



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https://jrotc.cyberstartamerica.org/student/



[Back to home page](#)

[JROTC Cadets](#) [JROTC Instructors](#)

JROTC Cadet Registration

If you have an existing CyberStart account and want to keep your progress, please check what email address you have associated with that account and register here with that same email address.

PERSONAL DETAILS

First name *

Last name *

Email address *

Confirm email address *

Tip: Personal email addresses usually work better. Our emails can sometimes get blocked by school systems.



The screenshot shows a web browser window with the following elements:

- Browser Tabs:** Three tabs are open: "Please confirm your email address", "Your CyberStart Account Has Been Created", and "Password Set - CyberStart".
- Address Bar:** The URL is <https://play.cyberstart.com/password-set-success>.
- Page Content:**
 - Header:** The word "CYBERSTART" is displayed in large, white, uppercase letters.
 - Message:** "Your Password Has Been Set" is centered in bold black text.
 - Text:** Below the message, it says "Thanks, you're all set up and only a step away from entering the exciting world of CyberStart!".
 - Button:** A blue button with rounded corners and a white border contains the text "Get started" with a mouse cursor icon over it.
 - Footer:** At the bottom, there are links for "Release Notes", "Privacy", "Terms & Conditions", and "Email Support". Below these is the copyright notice "© 2022 Helical Levity v1.12.1" and a small "CS" logo.
- Bottom of Page:** The text "or back." is visible in large white font.
- Address Bar (Bottom):** The URL <https://play.cyberstart.com/welcome> is visible in the bottom left corner of the browser window.





The CyberStart Learning Journey

Discover your path across four exciting bases and the real cyber skills you'll learn along the way...



INTERN BASE

3 levels, 12 free challenges
 Trial the breadth of easy to extreme challenges you could face in CyberStart

Beginner

Password Cracking

Intermediate

Code Analysis

Advanced

Command Line Use

HQ BASE

13 levels, 156 challenges
 Travel the world while thwarting the schemes of international cyber criminals

Beginner

Social Engineering



Top tip! Start your learning journey on any base and move between them whenever you like!

Advanced

Binary Exploitation

Advanced

Data Detection

Advanced

File Forensics

Advanced

Browser Dev Tools

Intermediate

Scripting

Intermediate

JavaScript Debugging

Beginner

Hashing

Beginner

Code Cracking

Beginner

Linux Commands

Beginner

Web App Attacks

Advanced

Network Scanning

MOON BASE

8 levels, 40 challenges
 Build your own programs to defend the moon from mysterious galactic threats

Beginner

Coding

Beginner

Code Analysis

Beginner

Encoding & Decoding

Beginner

Debugging

Intermediate

Brute Forcing

Advanced

Coding Logic & Control

Advanced

Data Extraction

Advanced

String Manipulation

Advanced

Network Forensics

Advanced

Memory Forensics

Intermediate

Password Security

Intermediate

File System Forensics

Intermediate

Memory Forensics

Beginner

File Forensics

Beginner

Log Analysis

Beginner

Windows Forensics

FORENSICS BASE

8 levels, 40 challenges
 Investigate crime scenes and examine evidence as a digital detective





Foundations Registration



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The current process is below. US Army JROTC Cadet Command may adjust in future.

- Level 1: Signup with license code at <https://sans-foundations.com/sign-up>
- Level 2: Upon completing Level 1, the Cadet will enter a Level 2 license code after logging in at <https://sans-foundations.com/sign-up>
- Level 3: Upon completing Level 2, the Cadet will enter a Level 3 license code after logging in at <https://sans-foundations.com/sign-up>
- Level 4 (GFACT certification): Upon completing Level 3, the student will register at <https://www.sans.org/registration/register.php?event=12345> for the SEC275/GFACT bundle using the Army JROTC specific voucher code.

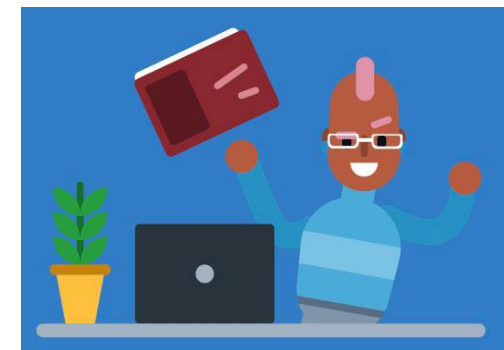
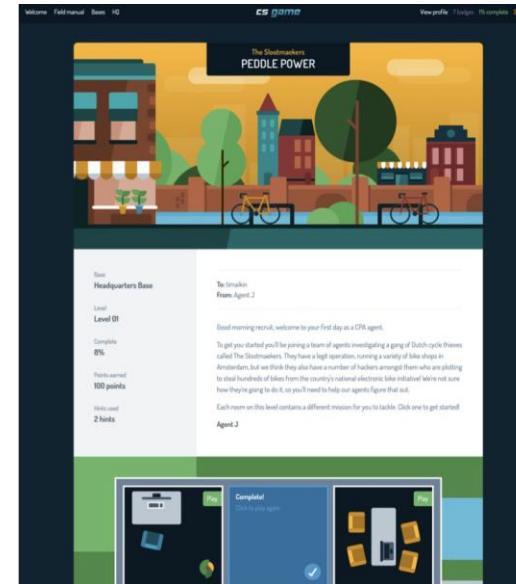


Why CyberStart



Leaders for Life

- CyberStart encourages every young person to try cyber security by putting fun first through an engaging and addictive gamified learning experience.
- Students jump into the thrilling world of a cyber agent, where they'll solve crimes and gain real-world cyber security skills through 250+ practical challenges across 4 exciting bases.
- Just by playing, students gain highly respected and desirable industry skills, including forensic analysis, password security and programming.
- The beginner-friendly learning curve gently onboards and progressively challenges our students, meaning anyone can advance their skills in cyber security.
- The skills students learn in the challenges are reinforced through CyberStart's Field Manual, which provides comprehensive write-ups and 90+ engaging video tutorials covering the cyber security fundamentals.



This We'll Defend



CyberStart



Leaders for Life

Four exciting bases to explore

- Intern Base: Intern base is the perfect way for students to find out what CyberStart is all about. Students will jump straight into their first assignment and see what life is like at the Cyber Protection Agency as they have a go at 12 hands-on cyber security challenges ranging from easy to hard.
- Headquarters base: HQ base contains challenges across all the cyber security disciplines. Based on authentic cyber security scenarios, players will learn a breadth of practical, real-world techniques and skills as they play through levels that advance alongside their knowledge.
- Moon Base: Students will learn how to program in the Moon base. But, unlike other programming learning tools, here they can write their own security tools and understand their limitations. For example, building their own password cracker helps them understand why and how passwords are weak.
- Forensics Base: Here students will step into the shoes of a police investigator, dealing with actual memory images akin to real-world investigations. Here, they will have to digitally decode and use their sleuthing skills to and the cyber criminals' digital trails.



Foundations Training Level 1



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Introduction

- Computer Components & Concepts: Computer Hardware, Data Storage & Representation, Logic & Data Manipulation, Storing Data & Files, and Cloud Computing.
- OS and Virtualization: Dive into Operating Systems Concepts, Terminology, and Functions, Virtualization.
- Linux: Introduce students to Linux, the Linux Environment, Linux Navigation, Commands, and Linux Architecture and Components. Focus on installing Linux, Navigation and Structure, Permissions, and Commands such as grep, cp, and much more. Practice with labs!
- The Web: Focus on Search Superpowers and WWW & Serving. Look into how search engines work and the most efficient ways to use them as well as an introduction to Web Servers, HTML, Cookies, etc.
- Networking Fundamentals: Learn about Networking Components and Hardware, Packets, Types of Network Addresses, TCP and UDP protocols, Subnetting, Email (SMTP, SPF, DKIM), DNS, TLD, forward & reverse lookup, ICMP, DHCP, OSI, TCP/IP, etc.
- Windows Foundations: Learn about Windows, Different Versions, Uses, Installation, Network Setup, Configuration, Changing Settings, Log Files, the Registry, File Permissions, User Accounts, Windows Command Line, Scripting, and PowerShell.



Foundations Training Level 2



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- Servers & Services: Introduction to Web, Database, DNS, Log, and Email servers; take a look at their basic setup and installation procedures. Cover Basic Hardening and Configuration.
- Advanced Computer Hardware: Look at how the CPU and RAM Work In-Depth (e.g. Memory: Stack and Heap), introduce GDB and How to Track Execution, and Advanced Storage Mechanisms such as RAID and Cloud Storage Mechanisms.
- Practical Programming & Concepts: Introduce programming in Python and C. Incrementally teach what a program is and how it works before delving into Writing Basic Programs and Introducing Various Strategies, Tools, and Conventions. Practice with labs, including labs such as Variables in Python, User Input in Python, Reading and Writing Files, Using TCP Sockets, Printing in C, String Handling and more.
- SQL: Introduce the Structured Query Language (SQL). Beginning with the basic SQL statements, JOIN'ing data, Operators and Database Administration



Foundations Training Level 3



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- **Security Concepts:** Introduce students to a variety of topics and tools such as Encryption, Encoding, Hashing, the Law, Ethics, Red Team vs. Blue Team, Risk Management, Critical Security Controls, Kali Linux, Slingshot and SIFT, Reconnaissance Tools and Techniques, and the Basics of Digital Forensics (e.g., Steganography, Memory Captures).
- **Offensive Security Concepts:** Introduce students to offensive security concepts and exploitation techniques, such as Command Injection, SQL Injection, Session Guessing, Directory Traversal, Clickjacking, Buffer Overflows, Phishing, Metasploit, Social Engineering, Privilege Escalation, Kernel Exploits, Bypassing UAC, Stored Credentials, and more!
- **Network and Computer Infiltration:** Cover topics and methods for Persistence, Lateral Movement, and Exfiltration. Students learn about Indicators of Compromise, Ports, Yara, Rootkits, ARP Cache, Extracting Passwords from Memory, Spotting Common Exfiltration Methods, and more.
- **Further Study:** Tips on how to keep learning in cybersecurity and utilizing your new skills and knowledge.



Level 4: GIAC Foundational Cybersecurity Technologies (GFACT)



- Receive hard copy course materials (books) for all Levels 1-3
- Review all online modules from Levels 1-3
- Study for GFACT certification exam & complete two certification practice exams
- Attempt proctored GFACT certification exam to earn certification:
- The GFACT certification validates a practitioner's knowledge of essential foundational cybersecurity concepts.
- GFACT-certified professionals are familiar with practical skills in computers, technology, and security fundamentals that are needed to kickstart a career in cybersecurity.
- GFACT has achieved accreditation by the ANSI/ISO/IEC 17024 Personnel Certification Accreditation Program. This worldwide benchmark of excellence validates that GFACT is a responsible, fair, and quality oriented certification.



Brigade Representatives



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- 2nd BDE Christian Delacruz
 - Request License Code (Tokens) from your Brigade Rep.
- 3rd BDE Melissa Moore
 - Brigade Rep. request tokens from Daniel Pfaff (USACC HQ).
- 4th BDE Eugene Gro'ce
 - Typically set the Foundations training access at 4 months so cadets see a deadline to meet.
- 5th BDE Rafael Morales
- 6th BDE Mary Carothers
- 7th BDE Tamiko Riley
- 8th BDE Gregory Stephens



Classification

CyberStart



Leaders for Life

QUESTIONS?



CyberStart Game

GO TO

<https://www.cyberstartamerica.org/jrotc/>

SANS Foundations course

GO TO

<https://sans-foundations.com/>



CyberStart Program



Leaders for Life

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Leadership Excellence
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