Cybersecurity involves defending devices and services from electronic attacks by hackers, spammers, and cybercriminals. It is the protection of computer systems, networks, hardware and software, and electronic data.

Throughout this Expedition, you will LEAD YOUR LEARNING by fully engaging with the resources and activities. You will be be asked to –

REFLECT   STRETCH
NAF
INNOVATE   SHOWCASE

➤ **REFLECT** about your skills, learning goals, and purpose

➤ **STRETCH** your knowledge and skills through active learning

➤ **INNOVATE** and iterate solutions for real-world challenges

➤ **SHOWCASE** your innovations and learning in a dynamic way

We encourage you to utilize our **Expeditions Idea Book** as you navigate this Expedition as a resource and space to get your creativity flowing, organize your ideas and research, and share your innovations and reflections.

Every so often you may see this briefcase icon. That indicates an opportune time to have a conversation with a mentor or local business leader to discuss industry trends, ideate solutions, solicit feedback, and/or present your project. (Speak to your educator if you need support making contact.)

REFLECT

As you watch the video, think deeply about these questions:

➤ What excites you about cybersecurity?

➤ What skills or traits would help you succeed in a cybersecurity career?

➤ What parts of Tony's work can you see yourself doing?

➤ What challenges exist in your community (school, local, or global) that cybersecurity could solve?

Meet Tony Gibson from Verizon, a Senior Manager of Security Operations and Compliance, who has over 20 years of experience in multiple areas of I.T. and proudly served in the U.S. Army

WHY A CAREER IN CYBERSECURITY?

Cybersecurity specialists are responsible for discovering vulnerabilities and risks in networks, software systems and data centers, and ensuring hardware and software applications are updated to prevent theft, loss, or unauthorized access. Check out CYBER.ORG's Cyber Career Profile to learn more about different careers in cybersecurity!

According to the U.S. Bureau of Labor Statistics, the potential for earning and growth in this career is significantly higher than many other industries. Check out these statistics:

$103K	33%	$372B
median annual wage	job outlook through 2030	expected job growth by 2028

Whose expertise can you tap into to learn more about this career? Could they participate in an informational interview with you and your peers or serve as a mentor?

*Meet Window Snyder, a computer security expert, author, and the founder and CEO of Thistle Technologies. If you would like to learn more about her, **follow her on Twitter**!*

What do Bad Bunny and Taylor Swift have to do with hacking?

It's still popular for passwords to follow pop culture trends so it's more common than you think for someone to use their favorite artist's name in their password. An average person in the U.S. has 70-80 online accounts, so one compromised password could lead to many hacked accounts.

Discover how a hacker guesses passwords using a dictionary attack.

NAF EXPEDITIONS

STRETCH

Expand your knowledge and skills by trying some of these activities:

➢ Watch **a cyberattack unfold**.

➢ Learn about **Cyber Security in 7 minutes**.

➢ Explore what **ethical hacking** means.

➢ Participate in **cybersecurity challenges**. You may have so much fun that you want to attend the **Air Force Association's Cyber Camp**.

➢ Combine fun with learning with **Chack** (hacker chess).

What are some other resources you can find that relate to your interests in Cybersecurity?

Mentors could speak to how cybersecurity has changed their job/company/industry, where they see this going in the future, or the overall impacts.

Google
Applied Digital Skills

Learn job-ready skills from anywhere with Google's video- and project-based lessons, free of charge.
*No tech experience is required. Click **HERE** to learn more.*

Learn how to create and safeguard secure passwords with the lesson **Create and Safeguard Passwords**.

STRETCH

Expand your knowledge and skills by exploring some of these resources:

THE ENGINEERING DESIGN PROCESS

As you think about problems to solve and what to innovate, be sure to implement the engineering design process. Even if you are not planning to be an engineer, this process and its different phases help with problem-solving, generating creative ideas, and communicating your project.

Check out the graphic below or watch *this video from Discover Engineering*.

THE ENGINEERING DESIGN PROCESS

QUESTION
INVESTIGATE · IDENTIFY · REFLECT
What is the problem or challenge?

IMAGINE
BRAINSTORM · IDEATE
How can I solve this problem?

PLAN
STRATEGIZE · STORYBOARD · STRETCH
What tools/resources do I need to solve this problem?

DEVELOP
DESIGN · INNOVATE · PROTOTYPE
What is the best approach to solve this problem?

TEST
COLLECT/REVIEW DATA · REFINE
Does the model solve the problem?

SHARE
COMMUNICATE · SHOWCASE
How can I clearly communicate my solution?

NAF EXPEDITIONS

INNOVATE

Identify a problem in your community (school, local, state, or global) or this industry, then innovate ways solve it.

DEVELOP A PRODUCT	Create a new product (digital or non-digital) that would solve the problem you have identified. (Consider designing, wireframing, or prototyping using platforms like Lucid, ProtoPie, or Figma, or code an app in MIT App Inventor.)
FIX A FLAW	Perform some user testing on an existing product and think of ways to remix and improve it for diverse users. Is there a practice or product that has a flaw you'd like to fix? Consider diverse users, then use that feedback to improve and recreate a product.
BE A CHANGE-MAKER	Create a movement at your school or community to amplify this industry or the skills sets needed to succeed in this field. You can start a chapter for a Career & Technical Student Organization (CTSO) or professional organization related to this field, host a college/career fair or local competition to highlight this industry. How about doing community outreach to share cybersecurity best practices? The possibilities are endless!

PRO TIPS:

- If the choices above don't appeal to you, you can create-your-own or generate ideas by exploring hackathon sites like hackclub or devpost.

- As you ideate, consider using customer journey mapping.

Is there a mentor or industry partner who can discuss the Engineering Design Process or UX Design Process to support your innovation? How can you gather mentor feedback as you iterate and innovate?

🌐 SHOWCASE

Once you complete your innovation, share your learning with the with an audience in one or more of these ways:

Why not plan a showcase where you and your peers can share presentations with the whole school, at a parent night, or for a panel of industry professionals?
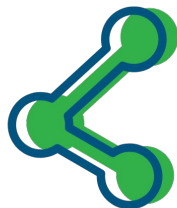
DIGITAL PORTFOLIO OR SITE	Create, code, or build a simple webpage to highlight your innovation, project, and learning journey. Consider bulb digital portfolios, Replit, GitHub, Google Sites, or Wix. Once it's developed, present it to an audience, and solicit feedback.
ONLINE MEDIA	Create a blog, vlog, or social media campaign (LinkedIn, YouTube, etc.) to highlight your innovation, project, and learning journey. Feel free to tag @nafcareeracads.
PITCH IT!	Pretend your audience is a group of investors. Pitch your innovation to them, sharing what you learned in the process. Allow for a Q&A, then solicit feedback on the quality of your project and/or pitch.

PRO TIPS:

- Level up your project by entering a school or district competition or challenge. (Think the science fair, CTSOs, hackathons, etc.)
- Not interested in options from our Showcase menu? You can present your creations in a format of your choosing.

STUDENTS, SHARE YOUR INNOVATION!

NAF would love to see your creation! After you get your educator's permission, submit yours **HERE**. We may highlight you on social media!

(We WILL NOT share your work without your educator's and your approval.)