CYBER COMPETITONS

A Primer

https://www.owlsector.us/rockcs/ctf.html

THE NATIONAL CYBER LEAGUE

CYBER PATRIOT
INTEGRITY. SERVICE. EXCELLENCE
NATIONAL HIGH SCHOOL CYBER DEFENSE COMPETITION

NCC

HACKAZON

Try Hack Me

CTFlearn

RockCS

C³ Cyber Training

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National Cyber Workforce and Education Strategy

"Make foundational cyber skill learning opportunities available to all; promote the pursuit of foundational cyber skills and cyber careers; and foster global progress in foundational cyber skills."

THE WHITE HOUSE
WASHINGTON

CYBER SECURITY COMPETITIONS

- CyberPatriot
- National Cyber League
- Pico CTF
- HACKAZON
- CTF Learn
- Other CTF Opportunities

Cyber Security Competitions are inventive and competitive ways to find and train America's next Cyber Defenders. Each of the various competitions are sponsored and hosted by major corporations, defense contractors, and governmental agencies.

Sponsors include US Airforce, US Army, National Security Agency, Central Intelligence Agency, Boeing, Northrup Grumman, the National Cyber Security Center, and many more. Colorado Springs is one of the major epicenters of Cyber Security training and competitions.

Cyber Security Competitions are fun and sometimes even exciting. They will draw in students throughout your school who would not normally be interested in "computer stuff".

Cyber Security Competitions provide close to realworld experience and help students visualize problems when they encounter them in written certification tests.

Cyber Security Competitions create scholarship opportunities for those students who succeed. Proven capabilities in competitions equal real-world potential in the Cyber Security Operations Cell (CSOC).

OWL SECTOR

A list of Cyber Competitions and much much more is available at https://www.owlsector.us/rockcs/ctf.html

www.CCubedTraining.com   john@CCubedTraining.com

C³ Cyber Training

CYBERPATRIOT
AFA's National Youth Cyber Education Program

DEFENSIVE

CyberPatriot is the one of the original competitions. It began its first season in 2009. In 2021 it had become the largest competition of its kind in the world. Over 2000 teams in 22 countries compete.

The competition places students in the roll of a network administrator for a mid-sized company. They must read and understand the company policies and then implement changes to meet those policies.

While not technically a Capture the Flag (CTF) game, the student is rewarded with points for finding security gaps in the system and hardening it.

Purely a defensive competition.

Competitors: *Highschool and Middle school students*

PROS:
 Excellent preparation for A+ or Network+™ exam.
 Very well organized
Requires critical thinking skills

CONS:
Very rigid in execution
4-hours of competition without "time-outs"
Requires considerable knowledge of Virtual Machine use to play

Cost: JROTC and Civil Air Patrol – Free; All Girl Teams – Free;
       $225/high school team - $175/middle school team

THE NATIONAL CYBER LEAGUE

POWERED BY Cyber Skyline

Open Source Intel
Cryptography
Forensics
Password Cracking
Website Exploitation
Python / C++/ Coding

https://nationalcyberleague.org/

The NCL, presented on Cyber Skyline (cyberskyline.com), enables students to prepare and test themselves against practical cybersecurity challenges that they will likely face in the workforce, such as identifying hackers from forensic data, pentesting and auditing vulnerable websites, and recovering from ransomware attacks.

Both offensive and defensive challenges.

Competitors: *Collegiate and Highschool students*

PROS:
Requires critical thinking at every level
Flexible for students who can only play a few hours at a time
Let's students compete individually and as a team
Various categories let's students identify their field of interest
    (pentesting, forensics, red team, threat hunting, etc.)
Awsome end of game reports for each student

CONS:
Linux skills and use is a must at higher levels

Cost: $45 per player

picoCTF{ }

Capture the Flag for Beginners

picoCTF is a free, online cybersecurity Capture The Flag (CTF) competition designed to teach and practice cybersecurity skills.

Created by Carnegie Mellon University (CMU) in 2013, it has grown into the largest high school hacking competition globally. The program offers a variety of features including a non-competitive practice space called picoGym, mini competitions, and classroom features for teachers and students.

Both offensive and defensive challenges.

Competitors: *Highschool students*

PROS:
Flexible for students who can only play a few hours at a time
Various categories similar to NCL (pentesting, forensics, red team, threat hunting, etc.)
In game Linux terminal is easy to use
.
CONS:
While practice is available at all times year-round, the competition only takes place for ten days in April.

Cost: Free

HACKAZON
Cyber Academy
Deloitte.

https://hackazon.org/

Hackazon is a platform developed by Deloitte which allows students and professionals to refresh and improve their technical cyber skills based on the latest developments in cyber security.

The platform provides 300+ ready-to-use, hands-on exercises on live systems, encompassing multiple difficulty levels and categories: from offensive hacking and forensics to secure development and cloud technologies and many more.

Competitors: *No Age or Grade Requirements*

PROS:
Available year round
Competitions can be customized
Used by the National CyberSecurity Center (https://cyber-center.org/)
   for live/in-person competitions
   .

CONS:
Competitions are not regularly scheduled / hard to plan for

Cost: Free

CTF LEARN

https://ctflearn.com/

CTFlearn is an online platform designed to help individuals-especially beginners-learn and practice cybersecurity skills through Capture The Flag (CTF) challenges.

The platform offers a wide range of problems covering various domains such as web security, cryptography, reverse engineering, forensics, and more, making it accessible for users looking to build a strong foundation in ethical hacking and cybersecurity

Competitors: *Highschool students and some Middle Schoolers*

PROS:
Challenges are listed by difficulty rating
Lots of online assistance for this game
This site is focused on teaching rather than competing
.

CONS:
No true competition events

Cost: Free

BUT WAIT! THERE'S MORE!

Actually, there's probably a LOT more! The websites listed below are good platforms but are more expensive, sporadic, require a higher level of training, or all of the above.

https://cyber-center.org/

https://www.uscybergames.com/

https://tryhackme.com/

https://www.hackthebox.com/

https://try2hack.me/

https://247ctf.com/

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HELPFUL WEBSITES AND VIDEOS

CTF Beginner Guide
https://www.youtube.com/watch?v=YAqZmMYudZU

CTFs explained in 5 Minutes
https://www.youtube.com/watch?v=nCMGIR8V-NE

EC-Council
CYBERSECURITY
EXCHANGE

Why Is Capture the Flag (CTF) Important in Cyber Security?

https://www.eccouncil.org/cybersecurity-exchange/ethical-hacking/capture-the-flag-ctf-cybersecurity/

BLOG
What is CTF in hacking? Tips & CTFs for beginners by HTB

https://www.hackthebox.com/blog/what-is-ctf

tecrefresh

A Beginner's Guide to Capture the Flag Cybersecurity Challenges
https://tec-refresh.com/blog/capture-the-flag-cybersecurity

OWL SECTOR
Short, fun games and links
https://www.owlsector.us

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