Plucotas' Cyber Magical University

- Office Area
- Cafeteria
- Under Construction
- Brewing Potions
- Hall of Magic Source
- Library
- Treasure Hunting
- Professor Turing
- Feeding Creatures
- Connecting Magic

Points:
- Professor Turing: 0/30
- Office Area: 0/30
- Cafeteria: 17/30
- Under Construction: 0/30
- Brewing Potions: 0/30
- Hall of Magic Source: 0/30
- Library: 0/30
- Treasure Hunting: 0/30
- Connecting Magic: 0/30

Total Points: 17
TEACHING CYBERSECURITY

GAMIFYING THE EDUCATION SYSTEM

Weijia Yan, Carnegie Mellon University
TALENT SHORTAGE

- Shortage in 2025: 3,500,000
- Current Workforce: 1,100,000
- Current job openings: 700,000
HOW DO WE TEACH CYBER AND RETAIN TALENT?
STUDENT'S PERSPECTIVE
LIMITED EXPOSURE

K-12 Students learning security

No 55%
Yes 45%
OTHER STUDENTS
CTF ON GAMIFYING SECURITY
WHAT ARE CTFS?
Question

Cryptography can be easy, do you know what ROT13 is?

cvpbPGS{arkg_gvzr_V'yy_gel_2_ebhaqf_bs_ebg13_u3dSftmh}

101,655 solves / 104,271 users attempted (97%)

Flag

picoCTF(FLAG)
ROT13 is a simple letter substitution cipher that replaces a letter with the 13th letter after it in the alphabet. ROT13 is a special case of the Caesar cipher.
Flag
Credit: David Brumley on How the Best Hackers Learn Their Craft

Jeopardy-Style CTF

Categories

- Cryptography
  - Caesar Cipher 50 pts
  - Frequency analysis 20 pts
  - RSA Encryption 40 pts
  - RSA Low Exponent 100 pts
- Basic Knowledge
- Reverse engineering
- Network security
- Program Exploitation
- Forensics
CTF
IMPLEMENTATION
CTF IN COMMUNITIES

Play with clubs, classmates, friends...
USE CASES

Teachers
High School Students
Parents
Clubs
Career Pivot
Everyone who wants to get into cyber!
YOUR EXPERIENCE WITH CTFS
PLAY PICO TOGETHER!
pico Game
LINKS:

picoCTF: https://picoctf.org/

pico Game: https://game-cdn.picoctf.org/2022/latest/WebGL/WebGL/index.html

External Resources: https://picoctf.org/resources.html
SHARE YOUR RESOURCES
NEXT STEPS
Community

332,500 Users
Africa, Japan, Canada, and the US
Largest in the World!
THANK YOU