Ice Breaker

Welcome everyone! Let's go around the virtual room and share one thing that has brought us joy or made us smile recently. It can be a small achievement, a funny moment, or even a heartwarming story.
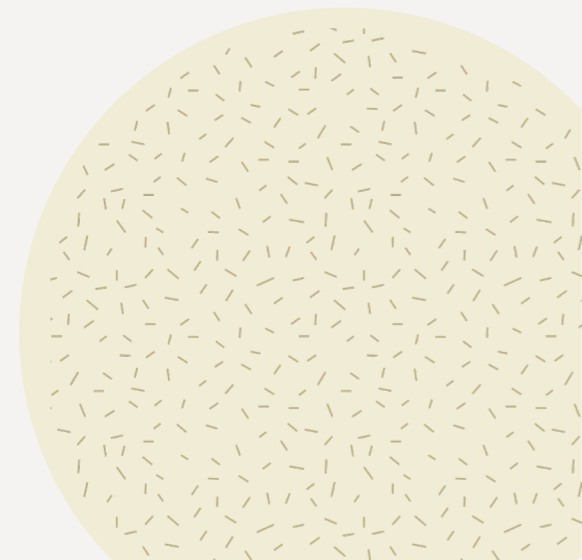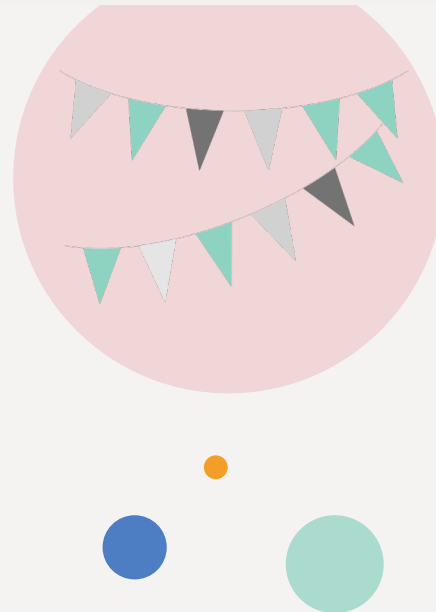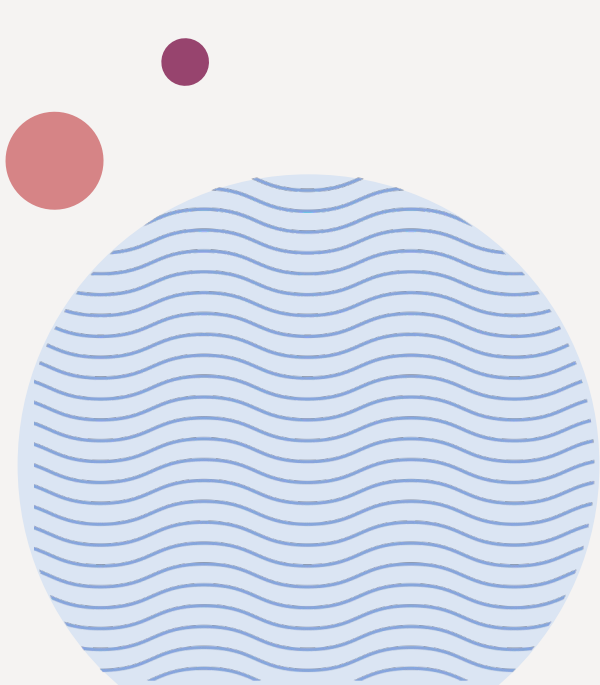
Idea Discussion

- Each group will describe their idea
- The entire team discusses the idea (90 seconds) and decides how promising it is as a classroom activity that
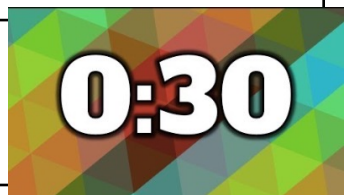 1. Teaches cybersecurity content
  2. Engages students in a meaningful way
  3. Can be readily implemented in a high school setting
  4. Is appropriate for the high school age group

Escape Room (A)

Real-Life Scenario Simulations (B)

Red Team/Blue Team (A)

Brute Force Password Hacking (B)

Kahoot (A)

Create an authentication app (B)

Monopoly (A)

Phishing Simulation (B)

Authentication Activity (B)

Password Checker (B)

Password Decoder (B)

Hacker Simulation (B)

Very Promising	Somewhat Promising	Slightly to Not Promising at All

2. Escape Room
   - Online version can be on Roblox
   - Each person would get a card with:
     - Front of card – list of questions that they need to find other people to answer
     - Back of card – list of question and answers that other people come to them for
   - Mix of questions from thing they learned throughout the year

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		Escape Room (A)	

Left panel items:
- Real-Life Scenario Simulations (B)
- Red Team/Blue Team (A)
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Real-Life Scenario Simulations (B)	**Very Promising**	**Somewhat Promising**	**Slightly to Not Promising at All**
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- Goal/Objective?
  - Online real life scenario/simulator
  - Video – like a crash course, talking about ways you can protect yourself
- What will students do?
  - They would play through scenario which would have different events depending on option they choose their will be consequences
  - They would be given a paper with question and answers would be in the video.
  - Scenario would show how easy it is to get into someone's password
- How are they graded?
  - Completion of the scenario
  - Answers from the video

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- Red Team / Blue Team Simulation (Focus more on blue team)
  - Scenarios
    - Engaging
      - Speed dating (matching game) clues to [...] people to find to get a coder password
      - Protect the country at war
        - Big scale engaging problems
      - Escape room, find parts of the password, special characters
        - Clues can be user authentication question
        - Add user authentication things, cybersecurity roblox game
      - Wordle style game to guess the password
    - Personalized
      - ↓ not high schoolers
      - Local company data breach
        - Stores on lockdown
      - Hacked social media
        - Change password
        - Change email password
        - Two-factor authentication
      - Game to see if you're looking at a phishing message or real safe pass
      - Jeopardy style game (question like which password is the best?)

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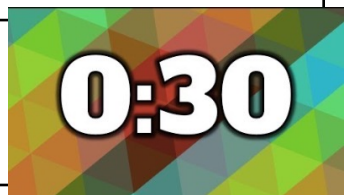
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- Goal:
  - Bruteforce password lists to crack social media accounts
- Tasks:
  - Code a python script that would help them bruteforce social media accounts.
  - Get to know what proxies and common password lists are.
  - Instructor will create multiple fake social media accounts without MFA that students would be encouraged to hack.
  - Once the student hacks it, they can change the account name to their name and it would indicate that have captured one flag.
  - They would also change the password of their cracked account so other students can't steal their flags.
- Grading:
  - Students with most flags should be rewarded and maybe they can present their techniques to the rest of the class.
  - Students should also be graded on the sophistication of their python scripts.

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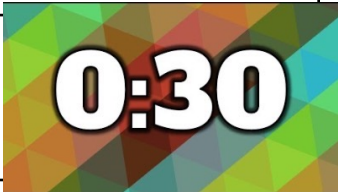
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Kahoot Style Game
- Show two messages that are similar and students have to identify the danger
  - Friend reaching out vs Hacker trying to get you to click a link
  - Company's promotional vs phisher
- Mix in need to know questions from class
- Engages entire class in one activity
- Done in classroom or on teams

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Authentication Activity
- Make the students create an authentication app, which verifies the password and has security questions. This allows the students to understand the process of verifying a password and security questions, on a friendly platform that allows them to personalize the app. The software used to create the app is similar to Scratch, therefore it doesn't involve actual coding, for the students that don't have experience.
- The grading is based on completion, have a running app the verifies the password and security questions provided by the student

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			Create an authentication app (B)

Cards on the left:
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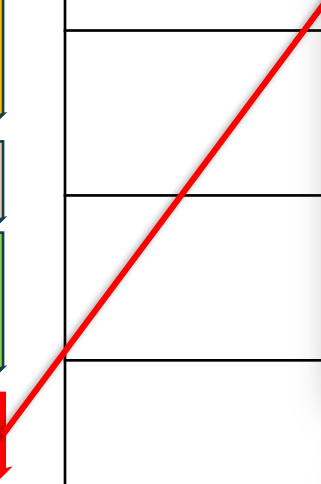- Password Checker (B)
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Monopoly (Board Game)
- Each property can be characters
- Chance card examples:
    - "You got hacked" --> go to jail
    - "Someone logged in" --> reset password
    - "Train stations" --> big companies, Meta, TikTok, google, Apple
    - "Free parking" --> scrolling social media
- Currency --> characters
- Goal --> make strongest characters
- When you pass go, get two characters
- Can be made online, reach out to university for making and coding this

Monopoly Style Games

- --> first three questions are authentication questions
- Chance --> "you got hacked"

--> "add to your password"

- Buy characters
- Answer questions
- Winner – strongest password
- Go to jail --> you got banned
- Trains – big companies that steal data

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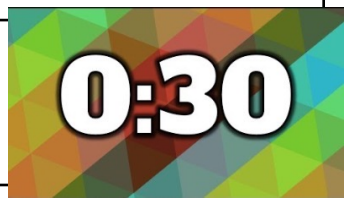4. Is appropriate for the high school age group

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Phishing Activity
- Have the students create a link that contains a space to enter personal information, like name, birth data and a social media password. The student will see how his info is captured and is now available to the owner of the link. This helps raise awareness of the different ways of phishing and teaches students to be careful when entering personal info on unknown links. This is relatable to daily life situations
- Based on completion

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- Goal
  - Understanding Biometric Authentication, Experience Biometric technology, Comparing convenience and security
- What will students do?
  - Divide class in teams.
    - Scavenger Hunt:
      1. Find a device that uses fingerprint scanner for authentication.
      2. Take a selfie using a device with facial recognition.
      3. Identify a application that uses voice recognition
      4. Look for a device that uses iris scanner
    - After the activity have a discussion on the advantages or the limitations and have a group presentation.

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	Authentication Activity (B)		

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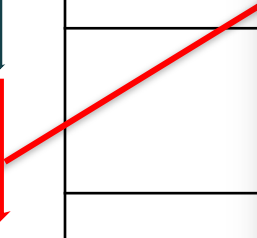Password Checker (B)

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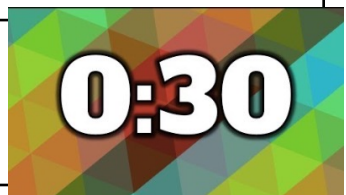
Password Decoder (B)

Hacker Simulation (B)

- Goal:
  - Creating strong password competition using an app which would check whether it's a strong password or not
- What will students do:
  - Students will enter their password into the app
- Graded on:
  - Satisfactory (--> if app accepts it) | Unsatisfactory (--> if app doesn't accept) grading system
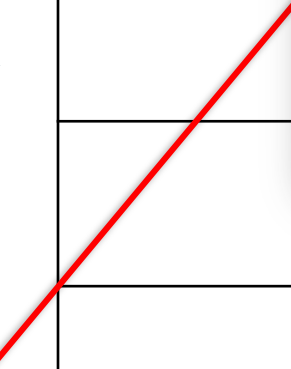
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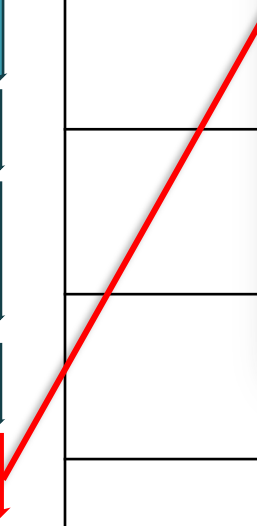- Authentication Activity (B)
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Callout box (Password Decoder):

- Goal/Objective:
  - Help students create unique and strong passwords.
  - Help understand password security.
  - Potential password risk
- What will students do?
  - Try decoding the password based on hints.
  - Identify weak passwords.
  - Help understand password scenario
- Grading:
  - Qualitive of password
  - The longer the password the better.
  - Not using your own personal information like (Name, birthday, House address, pet name, his/her gf/bf's name.

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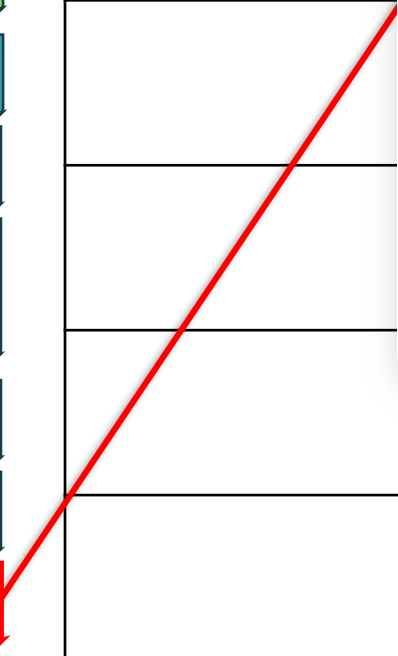**Authentication Activity (B)**

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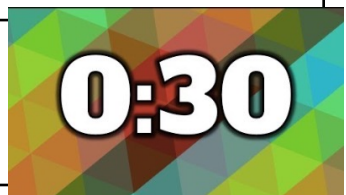
Password Decoder (B)

Hacker Simulation (B)

- Goal:
  - To teach students how the mindset of cyber hackers work, we will create a fake social media account which will communicate to students and try to extract their personal information. Students are not told about this as it is a surprise activity/test.
- What will students do:
  - Students will chat with the fake social media account user created by school.
- Graded on:
  - Students are expected not to share any personal information like bank account information, or their address, info related to their work or so. If a student shares any of this info, then he/she fails the task. Otherwise he passes.

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Final Comments

Thank You!

Your participation in this study is greatly appreciated.

Have a great rest of your day!