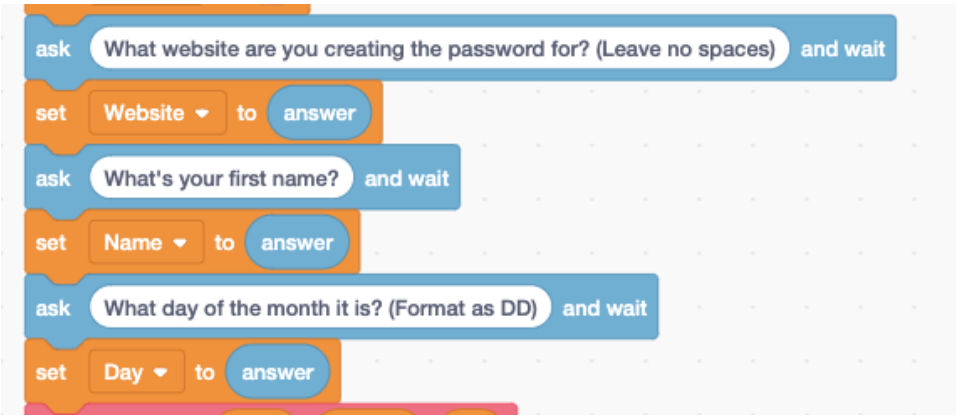
CyberSecurity - Simple Password Generator	
Objective	With the quick advancement of technology, there are also new threats on the internet. From scams, malware, and phishing, nobody is truly safe on the internet. However, there are many experts that can help you and your community stay safe on the internet. These experts study and work on Cyber Security. With the right mindset and determination, anyone can work on Cyber Security and protect their community from common threats. Today we will focus on a crucial part of our daily internet activities: Passwords. Passwords are used everywhere to protect your accounts and data from others. By creating the proper password, hackers will have trouble accessing your data. However, these passwords can easily be cracked if we use the same passwords or weak passwords that use common phrases and words. Let's create a password generator to help our family and friends stay protected.
Prep	Scratch Accounts - A general idea on while loops?
Materials Needed:	● https://scratch.mit.edu/
Warm Up and Introduction **15 Minutes**	**Use bolded headings to organize major questions to ask students** What do you think Cyber Security is? How do you access accounts such as Youtube, Instagram, and TikTok? Career Vid -An Introduction to Cybersecurity Careers https://youtu.be/-AkuKKJ8dN0 **Real-life application** Cyber Security is everywhere when we use technology. Passwords and 2-factor Authentication are just a few of the common ways we protect ourselves. "What is Cyber Security? How You can Protect Yourself..." 2:30 Tips for Cyber Security >> Passwords https://youtu.be/88-FENio9Yw
Activity **60 Minutes**	**Set Up** Log Into Scratch Open Up a new project >> Name it "Password Generator" **Explain Activity** Goal: Create our own password generators to avoid making the same passwords. 1. Open up Scratch and create a new project. Name is "Password Generator" 2. Next create four variables: Day, Website, Name, and Password a. On the menu, select Type Orange "Variables"

b. Press “Make Variable”
c. Type the name and keep selection on “For all sprites”
d. Next to the variables you made are checkboxes. These will show the user the inputs they place. You can leave them on, else turn them off.

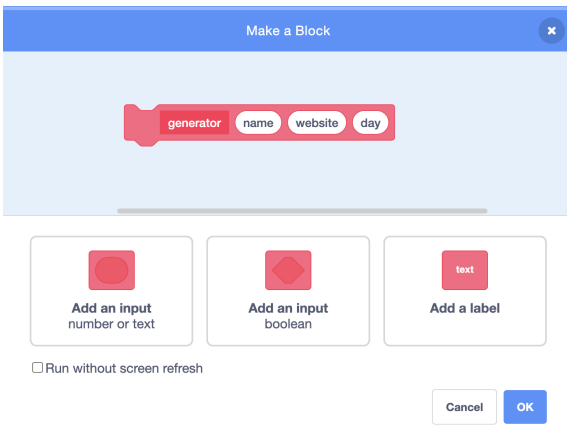
3. Next bring the start flag in the field. Go to the Type Yellow “Events” and bring “when FLAG clicked”
4. Under that block, go to Type Orange “Variables” and drag 3 “set [variable] to [value]”. Change the variable name for each variable you created and set the value to blank “ “

5. The next step is to get user input. Go to Type Blue “Sensing” and drag the “ask [question]” block. Then for each variable, as for the name/value of each variable.

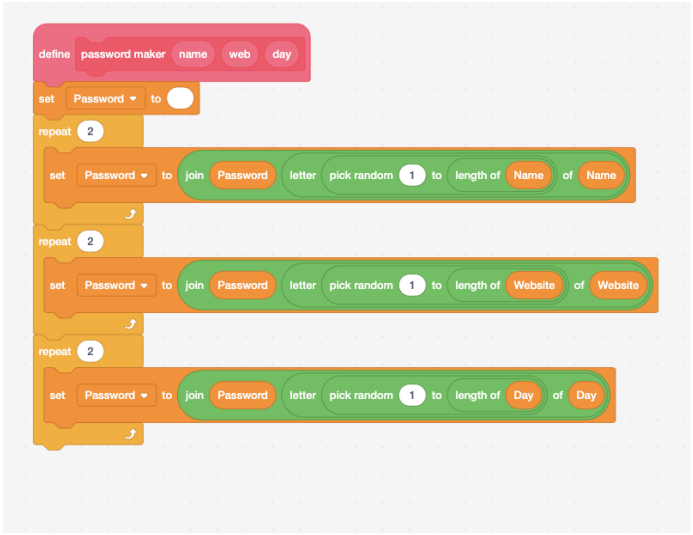


a. Each variable that you created (other than password) should have a corresponding question and are set to their variable.

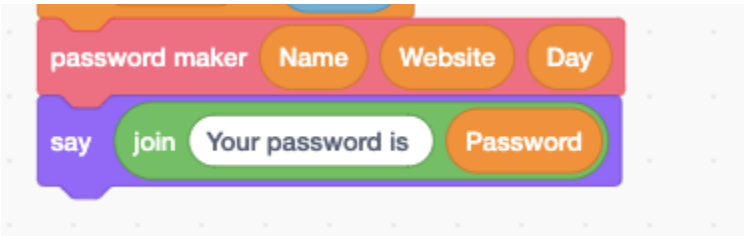
6. (TRICKY) Creating a function block
a. A function block allows us to create a segment of code that can be used multiple times in the program. They allow parameters, which are a special set of variables that can only be used in the function block.
b. In the Type Pink “My Blocks”, create a block
c. Add three parameters by pressing the “Add Input” button three times
d. Name each field the corresponding:



e. Drag the define block on the field.
f. Set the Password variable to blank
g. Underneath, we will create our password. For each variable, we will take two random characters (ie letters, numbers) from the variable. Each variable will have the same segment of code. Use a combination of "Variables" and "Operator" blocks



7. Finally, place the function in the main start code segment and drag the corresponding variables in the parameters.



8. Then make the sprite state the password by using the say block in the "Looks" and the join block from the "Operators"

Wrap-Up	**In Discussion** How do you think this generator would be useful? Who do you think would benefit from

10 Minutes	this generator? **In Programming Workbooks** -Who would you share this generator to? Why? -What did we use in our code that you can identify? (Loops, Variables, Functions) **Clean Up Instructions** Log off Scratch