Escape the Cyberattack Game
Teacher Instructions

Preparation:

1. Decide how many students will be in each group (ideally two to three students per group).

2. Print enough copies of the *Student Code Solution Sheet* (p. 2) and sets of the *Cyberattack Challenge Cards* (#1 through #5, located on pp. 3-7) so each group receives one of each.

Directions:

1. Divide the students into groups. Give each group one *Student Code Solution Sheet.*

2. Have the students write their names on the *Student Code Solution Sheet.*

3. Read aloud the scenario and instructions from the *Student Code Solution Sheet.*

4. Provide each group with *Cyberattack Challenge Card #1* and allow them time to solve the code.

5. As each group solves the code for *Cyberattack Challenge Card #1*, they should write the numbered code on the lines provided on the left side of the *Student Code Solution Sheet.*

6. The group then solves the formula related to the code, obtains a single number, and writes it in the circle on the right side of the *Student Code Solution Sheet.*

7. The group confirms with the teacher (you) that the code and circled number are correct (answer keys are provided). If the code is correct, provide the group with *Cyberattack Challenge Card #2.* If not, have them rework *Card #1*.

8. Continue until the groups complete all five *Cyberattack Challenge Cards.*

9. The groups will then use the five codes to solve for the final escape word located at the bottom of the *Student Code Solution Sheet*, thus enabling them to "escape" the cyberattack. **Note: Teacher Answer Keys are on pages 8-13 of this file.**

Alternative Options:

- Provide groups with all five *Cyberattack Challenge Cards* at once, and let them complete them in any order (with or without checking answers with you).

- Have students work alone instead of in groups.

Escape the Cyberattack Game
Student Code Solution Sheet

Name(s): _____

Scenario: You open an email you think is from a company you know and click on its attachment. Unfortunately the attachment contains ransomware – malicious software that locks and encrypts your computer. Cybercriminals demand a ransom of $500 to unlock it. Luckily there is another way to regain control of your computer. You can solve five challenges to determine the cyberattack escape word.

1. Solve each *Cyberattack Challenge Card,* checking with your teacher that the code is correct before moving to the next card (if instructed by teacher to do so).
2. Write the code on the corresponding lines below, and then solve for the missing circled number on the right.
3. Follow the instructions in the bottom box to obtain the word needed to escape the cyberattack.

Cyberattack Challenge #1 Code

___ ___ ___ ___ ___ Second digit plus 15 =

Cyberattack Challenge #2 Code

___ ___ First digit plus 12 =

Cyberattack Challenge #3 Code

___ ___ ___ ___ ___ Fifth digit minus fourth digit =

Cyberattack Challenge #4 Code

___ ___ ___ ___ ___ Fourth digit times 2 =

Cyberattack Challenge #5 Code

___ ___ ___ ___ ___ ___ Last digit times 5 =

Cyberattack Escape Word

Write the five circled numbers on the lines. ____ ____ ____ ____ ____

Change each number to a letter based on its position in the alphabet to solve for the cyberattack escape word (for example, 1 = a, 2 = b, 3 = c, 4 = d, and so forth).

____ ____ ____ ____ ____

Cyberattack Challenge Card #1
Logic Puzzle

Five people experienced a cyberattack. The cybercriminals accessed each person's computer through a different method and on a different day. Use the following clues and logical reasoning to determine the method and day of each cyberattack.

Directions: If a clue or logical reasoning rules out the day or method of the cyberattack, place an X in that box. If a clue or logical reasoning confirms the combination, place an O in the appropriate box. Hint: because each person's computer was attacked on only one day through only one method there can be only one O in that *section* of rows and columns of the grid (the remaining boxes in that *section* of rows and columns will have an X).

	Aisha	Brett	Jamal	Pedro	Zoe	shared password	computer virus	Internet scam	unsecure Wi-Fi	weak password
July 3										
July 4										
July 7										
July 8										
July 9										
shared password										
computer virus										
Internet scam										
unsecure Wi-Fi										
weak password										

1. The cyberattack that occurred last was not related to a password.
2. A virus attacked Aisha's computer exactly 3 days after Brett's computer was attacked. Brett had used his name as his password, which criminals guessed easily.
3. When Jamal used public, unsecure Wi-Fi on July 3, criminals accessed his computer.
4. Pedro's computer was attacked when he fell for an Internet scam that asked for personal info.

After solving the logic puzzle, write the day of the cyberattack above the corresponding person's name. The numbers make up the code for this challenge.

July _____	July _____	July ____	July _____	July _____
Aisha	Brett	Jamal	Pedro	Zoe

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #2
Cryptogram

Determine the pattern, and then write the missing letters of the cryptogam code in the boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13
z												

14	15	16	17	18	19	20	21	22	23	24	25	26
					d	c	b	u	o	i	e	a

Certain strategies and tools improve safety when using the Internet and social media. However, the letters of these techniques have been replaced with numbers. Use the above cryptogram code to decipher the following four cybersecurity strategies or tools.

1.

22	11	24	9	22	25

10	26	7	7	4	23	8	19

2.

18	24	8	25	4	26	13	13

3.

10	8	24	5	26	20	2

7	25	6	6	24	11	17

4.

13	23	20	14

7	20	8	25	25	11

Which of the above is used to control who can find and view a person's social media sites and limit the information that approved visitors can see? Write the <u>first</u> number of this term on the following lines. Use one line for each digit to form a two-digit code.

_____ _____

Copy this two-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #3
Do and Don't Activity

Certain actions do or don't help people stay safe when using smartphones, computers, or tablets. Complete each of the following sentences by writing Do or Don't on the blank line.

1. _____ secure a smartphone using a password, PIN, fingerprint, or facial recognition.

2. _____ remain logged into computers, accounts, or devices after using them.

3. _____ install required software updates, antivirus programs, and security patches.

4. _____ chat with and/or share personal details with strangers online.

5. _____ call the given phone number or provide access to a computer if a pop-up window states the computer is "infected" with a virus.

6. _____ understand and use privacy control settings for Internet search engines and social media sites.

7. _____ use the same password for all devices and accounts.

8. _____ be careful when clicking hyperlinks and email attachments.

9. _____ keep personal and confidential details and photographs private.

10. _____ post on social media any pictures, names, or details of friends without their knowledge and permission.

List the numbers of the five do actions in order on the following lines.

_____ _____ _____ _____ _____

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #4
Word Scramble

Unscramble the letters in each box to determine a word related to passwords, and then write the word on the first line. Next, write the number that corresponds with the first letter of the unscrambled word on the second line.

Box A

Word: _____

o_9 t_6 e_4 c_7 r_3 t_6 p_8

Number of first letter of word: ____

Box B

Word: _____

c_3 p_9 e_2 l_6 o_1 m_5 x_8

Number of first letter of word: ____

Box C

Word: _____

e_9 u_8 s_1 c_7 e_9 r_3

Number of first letter of word: ____

Box D

Word: _____

t_6 n_8 g_4 s_9 o_2 r_3

Number of first letter of word: ____

Box E

Word: _____

n_2 g_3 h_8 c_5 a_4 e_9

Number of first letter of word: ____

List the number of the first letter from each box's unscrambled word in order (from A to E) on the following lines.

_____ _____ _____ _____ _____

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #5
Multiple-Choice Questions

People must be careful and smart when using social media. Read each question related to social media and then circle the correct answer.

A. Which is a good password strategy when using social media?

1. Choose a strong one. 2. Use it for all sites. 3. Never change it. 4. Make it 1234.

B. Which of the following is safest for a person to post on social media?

1. Social security number 2. Days until summer 3. Phone number 4. Date of birth

C. Which is a safe strategy when using social media?

1. Interact with strangers. 2. Post private details 3. Use privacy tools. 4. 1, 2, and 3

D. Which of the following should a person not post on social media?

1. Current location 2. Inappropriate videos 3. Home address 4. 1, 2, and 3

E. What should a person do when using social media?

1. Think before posting. 2. Spread gossip. 3. Believe everything. 4. 1, 2, and 3

F. Which social media posting can hurt a person's ability to get a job or get accepted to college?

1. Hateful comments 2. Embarrassing photos 3. Reckless behavior 4. 1, 2, and 3

List the number of the correct answer for each question in order (from A to F) on the following lines.

_____ _____ _____ _____ _____ _____

Copy this six-digit code to the *Student Code Solution Sheet.*

Escape the Cyberattack Game
Student Code Solution Sheet

Name(s): Answer Key

Scenario: You open an email you think is from a company you know and click on its attachment. Unfortunately the attachment contains ransomware – malicious software that locks and encrypts your computer. Cybercriminals demand a ransom of $500 to unlock it. Luckily there is another way to regain control of your computer. You can solve five challenges to determine the cyberattack escape word.

1. Solve each *Cyberattack Challenge Card,* checking with your teacher that the code is correct before moving to the next card (if instructed by teacher to do so).
2. Write the code on the corresponding lines below, and then solve for the missing circled number on the right.
3. Follow the instructions in the bottom box to obtain the word needed to escape the cyberattack.

Cyberattack Challenge #1 Code

7 4 3 9 8

Second digit plus 15 =

19

Cyberattack Challenge #2 Code

1 0

First digit plus 12 =

13

Cyberattack Challenge #3 Code

1 3 6 8 9

Fifth digit minus fourth digit =

1

Cyberattack Challenge #4 Code

8 3 1 9 5

Fourth digit times 2 =

18

Cyberattack Challenge #5 Code

1 2 3 4 1 4

Last digit times 5 =

20

Cyberattack Escape Word

Write the five circled numbers on the lines. 19 13 1 18 20

Change each number to a letter based on its position in the alphabet to solve for the cyberattack escape word (for example, 1 = a, 2 = b, 3 = c, 4 = d, and so forth).

s m a r t

Cyberattack Challenge Card #1
Logic Puzzle

Five people experienced a cyberattack. The cybercriminals accessed each person's computer through a different method and on a different day. Use the following clues and logical reasoning to determine the method and day of each cyberattack.

Directions: If a clue or logical reasoning rules out the day or method of the cyberattack, place an X in that box. If a clue or logical reasoning confirms the combination, place an O in the appropriate box. Hint: because each person's computer was attacked on only one day through only one method there can be only one O in that *section* of rows and columns of the grid (the remaining boxes in that *section* of rows and columns will have an X).

	Aisha	Brett	Jamal	Pedro	Zoe	shared password	computer virus	Internet scam	unsecure Wi-Fi	weak password
July 3	X	X	O	X	X	X	X	X	O	X
July 4	X	O	X	X	X	X	X	X	X	O
July 7	O	X	X	X	X	X	O	X	X	X
July 8	X	X	X	X	O	O	X	X	X	X
July 9	X	X	X	O	X	X	X	O	X	X
shared password	X	X	X	X	O					
computer virus	O	X	X	X	X					
Internet scam	X	X	X	O	X					
unsecure Wi-Fi	X	X	O	X	X					
weak password	X	O	X	X	X					

1. The cyberattack that occurred last was not related to a password.
2. A virus attacked Aisha's computer exactly 3 days after Brett's computer was attacked. Brett had used his name as his password, which criminals guessed easily.
3. When Jamal used public, unsecure Wi-Fi on July 3, criminals accessed his computer.
4. Pedro's computer was attacked when he fell for an Internet scam that asked for personal info.

After solving the logic puzzle, write the day of the cyberattack above the corresponding person's name. The numbers make up the code for this challenge.

July 7	July 4	July 3	July 9	July 8
Aisha	Brett	Jamal	Pedro	Zoe

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #2
Cryptogram

Determine the pattern, and then write the missing letters of the cryptogam code in the boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13
z	y	x	w	v	t	s	r	q	p	n	m	l

14	15	16	17	18	19	20	21	22	23	24	25	26
k	j	h	g	f	d	c	b	u	o	i	e	a

Certain strategies and tools improve safety when using the Internet and social media. However, the letters of these techniques have been replaced with numbers. Use the above cryptogram code to decipher the following four cybersecurity strategies or tools.

1.

22	11	24	9	22	25
u	n	i	q	u	e

10	26	7	7	4	23	8	19
p	a	s	s	w	o	r	d

2.

18	24	8	25	4	26	13	13
f	i	r	e	w	a	l	l

3.

10	8	24	5	26	20	2
p	r	i	v	a	c	y

7	25	6	6	24	11	17
s	e	t	t	i	n	g

4.

13	23	20	14
l	o	c	k

7	20	8	25	25	11
s	c	r	e	e	n

Which of the above is used to control who can find and view a person's social media sites and limit the information that approved visitors can see? Write the <u>first</u> number of this term on the following lines. Use one line for each digit to form a two-digit code.

1 _____ 0 _____

Copy this two-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #3
Do and Don't Activity

Certain actions do or don't help people stay safe when using smartphones, computers, or tablets. Complete each of the following sentences by writing Do or Don't on the blank line.

1. Do secure a smartphone using a password, PIN, fingerprint, or facial recognition.
2. Don't remain logged into computers, accounts, or devices after using them.
3. Do install required software updates, antivirus programs, and security patches.
4. Don't chat with and/or share personal details with strangers online.
5. Don't call the given phone number or provide access to a computer if a pop-up window states the computer is "infected" with a virus.
6. Do understand and use privacy control settings for Internet search engines and social media sites.
7. Don't use the same password for all devices and accounts.
8. Do be careful when clicking hyperlinks and email attachments.
9. Do keep personal and confidential details and photographs private.
10. Don't post on social media any pictures, names, or details of friends without their knowledge and permission.

List the numbers of the five do actions in order on the following lines.

1 3 6 8 9

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #4
Word Scramble

Unscramble the letters in each box to determine a word related to passwords, and then write the word on the first line. Next, write the number that corresponds with the first letter of the unscrambled word on the second line.

Box A

Word: protect

Number of first letter of word: 8

o_9 t_6 e_4 c_7 r_3 t_6 p_8

Box B

Word: complex

Number of first letter of word: 3

c_3 p_9 e_2 l_6 o_1 m_5 x_8

Box C

Word: secure

Number of first letter of word: 1

e_9 u_8 s_1 c_7 e_9 r_3

Box D

Word: strong

Number of first letter of word: 9

t_6 n_8 g_4 s_9 o_2 r_3

Box E

Word: change

Number of first letter of word: 5

n_2 g_3 h_8 c_5 a_4 e_9

List the number of the first letter from each box's unscrambled word in order (from A to E) on the following lines.

8 3 1 9 5

Copy this five-digit code to the *Student Code Solution Sheet.*

Cyberattack Challenge Card #5
Multiple-Choice Questions

People must be careful and smart when using social media. Read each question related to social media and then circle the correct answer.

A. Which is a good password strategy when using social media?

1. Choose a strong one. 2. Use it for all sites. 3. Never change it. 4. Make it 1234.

B. Which of the following is safest for a person to post on social media?

1. Social security number 2. Days until summer 3. Phone number 4. Date of birth

C. Which is a safe strategy when using social media?

1. Interact with strangers. 2. Post private details 3. Use privacy tools. 4. 1, 2, and 3

D. Which of the following should a person not post on social media?

1. Current location 2. Inappropriate videos 3. Home address 4. 1, 2, and 3

E. What should a person do when using social media?

1. Think before posting. 2. Spread gossip. 3. Believe everything. 4. 1, 2, and 3

F. Which social media posting can hurt a person's ability to get a job or get accepted to college?

1. Hateful comments 2. Embarrassing photos 3. Reckless behavior 4. 1, 2, and 3

List the number of the correct answer for each question in order (from A to F) on the following lines.

1 2 3 4 1 4

Copy this six-digit code to the *Student Code Solution Sheet.*