

Name \_\_\_\_\_

Date \_\_\_\_\_

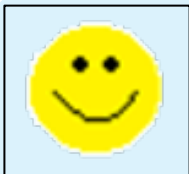
## Who Are Your Friends? A **Cybersecurity** Mystery



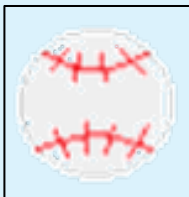
Shaun Penner, a student at Gaines High School in Baltimore, was looking forward to graduation and all the fun activities that come with the end of senior year. Shaun and his close friends, Kaitlin and Brandon, are inseparable. They spend every day after school together and even share their social media accounts with each other. They love playing games and sharing jokes on their social media until one day, a joke about school trespassing is posted on Shaun's profile. Shaun claims he didn't do it but the school learns of this post and has now banned him from walking the stage at graduation. Shaun is devastated and calls on you, a member of the cyber-defense team, to help clear his name and keep his graduation plans intact.

### Resources:

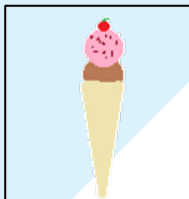
Shaun has given us access to his emails and social media accounts to investigate for suspicious activities. The three people he has had regular correspondence with recently include Kaitlin, Brandon and Breana. Throughout this activity, you will find evidence and clues that point to a culprit and possible motive.



Kaitlin Harden is Shaun's best friend and confidant. She is looking forward to college and spending the summer after graduation with her best friends. Kaitlin has been developing some computing skills throughout her last year of high school. She likes to share what she learns with her other friends.



Brandon Webster is part of the friend group with Shaun and Kaitlin. Brandon lives next to Shaun and has known him since he was three years old. Brandon like to spend time surfing the web and finding the funniest memes. He will do anything to get a laugh.



Breana Everett is the captain of the cyber defense team and has graciously agreed to help Shaun try and identify who the culprit is. She is very tech savvy and is looking forward to continuing her education in computer science. Breana has many classes with Shaun and has been building a friendship with him over the school year.

## Part 1: Social Media Investigation

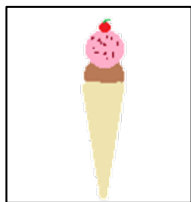
Shaun has given us his cell phone as evidence. Use his main social media app, “The Book”, to analyze Shaun’s interactions with the other characters and find any evidence you think links them to the hacking. Read through each character’s profiles and Shaun’s messages.



Kaitlin Suspicious Activity:



Brandon Suspicious Activity:



Breana Suspicious Activity:

Other noteworthy evidence:

## Part 2: Email Investigation

Shaun has given us some of his emails which he feels were suspicious and sent to him around the time frame of the hacking. Identify any emails you think are suspicious or related to the cyber-attack. Remember to checkout links, images, and message content.

### Email 1

Listed Sender: \_\_\_\_\_

Subject: \_\_\_\_\_

Why do you think this email is fake?

Is this email related to the incident? If so who do you think sent it?

### Email 2

Listed Sender: \_\_\_\_\_

Subject: \_\_\_\_\_

Why do you think this email is fake?

Is this email related to the incident? If so who do you think sent it?

### Email 3

Listed Sender: \_\_\_\_\_

Subject: \_\_\_\_\_

Why do you think this email is fake?

Is this email related to the incident? If so who do you think sent it?

## Part 3: Cryptex Challenge

In the week following Shaun's hacking, he found a cryptex and notebook in his locker that did not belong to him. He thinks that the items are somehow related to the hacking investigation and brings them to us for further analysis.

Can you open the cryptex?

Maybe this is evidence that relates back to our suspect, what possible passwords might relate to this suspect?

What is inside the cryptex?

# Who Are Your Friends? | A Cybersecurity Mystery

Place the USB drive into your computer and click on the application file.

What happens?

How is the journal helpful? **DO NOT** write in the journal but use the space below for your notes and work.

Find the key and use it to decrypt the password:

K = \_\_\_\_\_

Plaintext																																					
Ciphertext	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z											

\_\_\_\_\_

**A      G      O      B      D      I      E      S      Y      Z**

Search through the contents of the USB drive. Try and open all of the files.

Does anything stand out?

## Part 4: Wrap-Up

Congratulations! You have completed the investigation for Shaun and are ready to report your findings to him. Below you may identify who the culprit is and what you think happened along the way.

Whodunnit? \_\_\_\_\_

Explain what you think happened based on everything you found out and the evidence you collected.