



STUDENT PACKET

Scenario

Reporter: NEWS FLASH!!!! Outbreak of student identity theft cases in the Orange Heights neighborhood. Fifteen known cases of identity theft have occurred within the last several months with all students attending Orange Heights Middle School. Here today to share her story is Anna Jimenez, an eighth grade student at Orange Heights Middle School. Welcome Anna.

Anna: [Anna smiles] Glad to be here.

Reporter: Anna, tell us a little about your story.

Anna: Well my mom tried to open a college savings account at the bank, but she discovered that there was already an account that had been opened with my Social Security Number. And they wanted my mom to pay back like a zillion dollars that they said we owed. And they said we had cashed a check for like two thousand dollars and said we were writing bad checks. Then later my brother Gabriel, he just started college, they said he had three different credit cards and telephone bills adding up to thousands of dollars –none of which were his.

Reporter: So Anna it seems like the difficulties involve you and the rest of your family.

Anna: Yes. And there are others in my school and neighborhood that are having the same issues.

Reporter: Well we are excited to let you know that the all girls middle school Cyber Super-Investigators (CSI) will collect and explore a variety of cyber and physical evidence to learn more about how these identity thefts are occurring. Clues provided by the lead investigators, the cyber professionals speaking at the Cool Careers in Cybersecurity for Girls Workshop, will help the middle school girls solve the crime!

Anna: This would be great if they could help out!

Reporter: Stay tuned to CyberEntertainment TV for more information on this developing investigation.





Cryptography 1

Duration: Each student session lasts for 20 minutes. Students will have a few minutes to travel to their next session. You are welcome to start your session as soon as you are settled and ready to begin.

Session Background and Overview: Anna's bother Gabriel lost his iPhone earlier in the month. Unfortunately he did not password protect it. Anyone could pick it up and gather all sorts of information. In addition, he had chosen the *Keep Me Logged In* option on both his Facebook and an iTunes accounts. By gathering up other information a person could easily figure out the user name, but how hard will it be to guess the password? Each group of students will learn more about decrypting codes, and will decrypt a message and figure out a password using a frequency chart or cryptography wheel and other clues. This will lead to a discussion about proper security protocols as well as career options in this area.

Objectives:

- Understand pattern recognition and letter frequency
- Gather other clues to piece together answers.
- Decrypt a message and crack a password.

Materials/Supplies :

- Letter frequency chart and Cryptography wheel
- Encrypted messages and password to be decrypted
- Cipher sheet, wheel and frequency table.
- Take home and parent materials

HINTS:

- Look at the letters that occur most frequently in the English language
- Which letters appear most often as first letters of words?
- When viewing Gabriels Facebook account you can see he is really into **sky diving**
- Accessing the iphone email shares the email account but you still need to get the password. When you emailed iTunes the / *forgot my password* option they emailed back the hint you gave when setting up account. For what is your favorite color? Gabriel listed **blue**.

Final Thoughts:

- One way to protect yourself online is to have a strong password. A cipher can help you to create a strong password. Turning a phrase or a pattern on the keyboard in a combination of numbers, symbols, upper and lower case letters based on a cryptology algorithm will help you keep your data safe and help you create something you will remember.

Cool Careers for Girls in Cybersecurity 2012



Cryptography 1

Decrypt this Clue:

**MAX ITLLPHKW MH ZTUKBXEL TVVHNGM BL
UENXLDR**

What is his password for iTunes account?

CyberCareer:

What is cool about this job?
