

Cyber Security Club cracks codes

New club masters coding techniques and decodes computer puzzles
by Mac Guthrie

While to most students coding would appear to be mere gibberish, to the members of the brand new Cyber Security Club, this seemingly random string of twenty characters is a puzzle to solve, and a pretty easy one at that.

Most of the group's meetings begin by laying down a few rules for that day's encryption and decryption practice: the hidden message had to be a real message, the code had to be twenty characters long, and the winning team gets candy.

Each team of about four students each has ten minutes to prepare a hand-typed code in python to encrypt their message.

This new club "has a lot of potential" for success Sophomore Greyson Miller said. He joined the club with some background in computer science but hadn't known any Python, so he is largely learning from scratch.

Sophomore Aidan Klibanoff agreed and said that while he "did a program two summers ago" he entered

the club with not much background knowledge in computers and had no problem fitting in. He explained that he enjoyed the club's focus on hands-on-learning and the opportunity to "learn more about the subject."

Each team sat huddled around the monitor as they prepared a caesar cipher, a simple cryptography tool where each letter in the original message is replaced with a letter corresponding to a certain number of letters up or down in the alphabet (i.e. A +3 is a D).

Many of the current members are at least interested in a potential computer science career

Despite this system's relative simplicity, one student realized that by increasing the key for every letter of the message, they could complicate the cipher into a vigenere cipher, or a system of interwoven caesar ciphers, leaving the other team with 26^{26} (or $6.1561196e+36$) potential solutions, an impossibly high number of options to solve with a brute force attack.

While the opposing team was quickly able to solve the simple caesar cipher (the secret phrase mentioned

at the beginning of the article was "buckminsterfuller(eme)" a famous architect, systems theorist and inventor) the vigenere cipher they had developed would prove more difficult.

"[In our meetings] we get to work on problems" Junior Silpian Dhiantravan said. He also explained that if somebody is interested and willing to learn, they would be able to succeed as "the commands we are using aren't very complicated."

"Anyone can join, you don't need to have a special ability or skill" club founder sophomore Matt Geimer said. He stressed that anybody who is interested should come and try it out.

Cyber Security and computer science right now are a lucrative field to enter, and that can be a draw for many students. Many of the current members are at least interested in a potential computer science career.

Geimer is passionate about cyber security, and after being inspired by reading about another school's cyber security competition, his interest had been piqued. He explained "the whole idea of being able to protect data, and stop people from reaching items they shouldn't be reaching for, really appealed to me."

Dhiantravan echoed these sentiments, and added he was grateful to have access to such a unique opportunity in high school.



Cyber Security Club students team up to solve computer puzzles | Guthrie

After ten minutes, the caesar cipher had been solved and both teams devoted themselves towards cracking the substantially more complicated vigenere cipher.

Shifting their work frequently between computers and the several whiteboards adorning the room, the team attempted to narrow the number of possible keys down from the 40,000+ possibilities.

Eventually the realization dawned on many of the club members that it was getting late, and their prospects of finding the

key were slim. They took a few minutes to debrief, reflecting on things that members had learned, and errors they had made that day.

Geimer explained that the club has been going "very well" and that he is highly optimistic about the club's future. The club is planning to expand to other games and exercises such as Minecraft and capture the flag type hacking games.

Geimer explained that being club head means being able to "show people what they can do with just a bit of thinking, and some letters."

Debate dominates state

Debate students bring home first place trophies at IHSA tournament
by Ben Morrissey

The New Trier Debate Team dominated this year's state championships on Mar 17 and 18 by winning first place in both the Lincoln Douglas and Policy debates

The Lincoln Douglas and Congress debates are individual events, whereas the policy debate is completed with teams of two.

For every debate, one side argues for the policy or topic in question and the other argues against it.

For the policy debate in this tournament, students argued whether or not the U.S should take foreign policy action on China. For the Lincoln Douglas debates, competitors argued whether housing is a right or not.

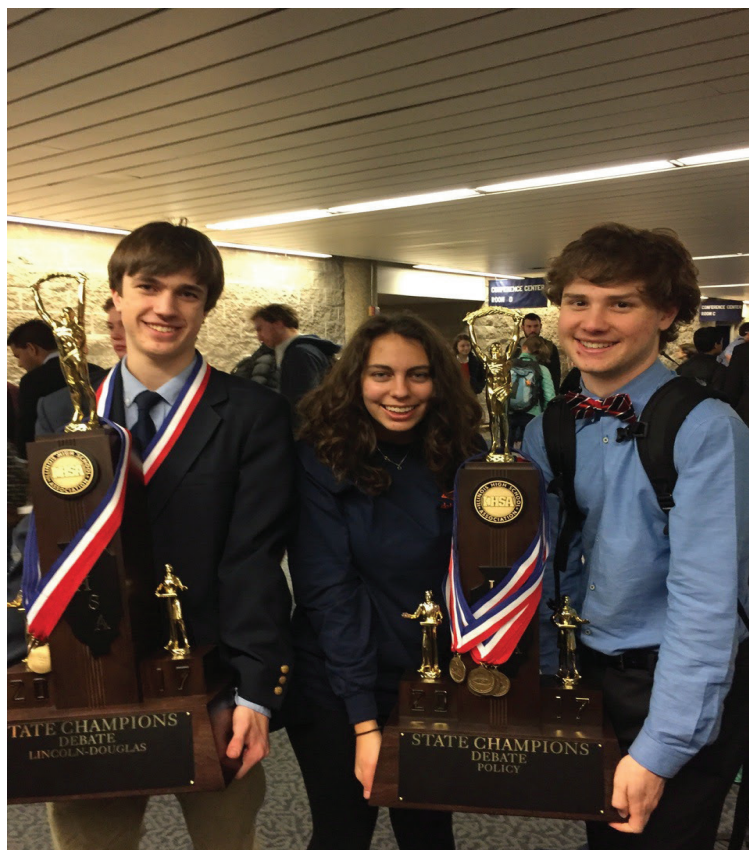
The topic of the debates change every two months so competitors might debate the same topic at multiple tournaments. This is important because the debates are filmed and this allows students to find out what arguments their opponents argued in the debate from a previous tournament.

Students do research on their arguments in strategy sessions to figure out what they might say and find the holes in their arguments.

"We tailor our arguments to the types of strategies our opponents are likely to deploy based on what they've argued throughout the season since September," Buckman explained.

According to Buckman, when their opponents give arguments that they did not expect, they are forced to adjust their arguments on the spot.

"It happens sometimes, no matter how much we prep. We have to use research we've produced for other purposes and apply it to



Seniors Ben Schwabe, Celia Buckman, and Connor Warshauer celebrate their first place wins at IHSA Varsity Debate Championship. | Debate

new arguments," Buckman said.

Once the debaters have done their research and have all of the information they need to compete, they participate in mock debates.

During the debates students must pay close attention to what their opponents are saying, along with notes to help them conduct their own arguments.

After the debate, a panel of judges look over the notes they took during the debate to decide a winner.

The judges take a long look at their notes before deciding who they believe won the debate. If there is a clear winner in the debate, it can take only 5 or 10 minutes to decide the winner. However, if the debate is close, it can take 20 or 30 minutes to decide the winner.

"This is my least favorite part of the debate. I always think we lost. It's really nerve-racking," Buckman said.

For this tournament, the two New Trier students did not have to wait long to find out who won the debates, as they convincingly won their debates 5-0.

According to Vinson, one of the best parts was celebrating their victories at the end.

"It was great to see kids hold the trophy at the end," Vinson said.

Buckman credited the work that the entire debate team did for her victory.

"I was so happy for my whole team. Everyone put in a lot of effort to make it happen and it was really rewarding." Buckman said.

Alum participates in popular TV competition

NT Grad joins past season of ABC's "The Bachelor"
by Mia Sherin

On the latest season on the Bachelor, one contestant who stepped out of the limo was New Trier alum Elizabeth Whitelaw.

Before embarking on this crazy journey, Whitelaw attended University of Illinois at Urbana-Champaign and got a B.S in Psychology, and then she moved to Texas to work as a marketing manager.

She definitely feels as though New Trier set her up for success, and appreciates the quality of education that she was able to receive throughout her high school career.

"I feel like I got the best education possible, had the best extracurriculars at my disposal, and I grew my talents in the music, dance, and theatre department greatly in my time there," she said.

Speaking of her talents in music, dance, and theatre, Music Department Chair David Ladd spoke highly of Whitelaw and her involvement in the arts while a student at New Trier.

"I remember her being a talented young lady who could do it all, strong skills in all three realms of musical theatre; singing, dancing and acting. She worked hard at her craft and had many friends in the class."

Going back to Whitelaw's experience on the Bachelor, it was a unique experience that she had a lot to share about.

It all began when host Chris Harrison popped up on TV and announced that there was a casting call in Dallas, only a few blocks away from where Whitelaw lives. "Why not?" she said.

From then on, the entire process was long and rigorous. She explained that after the application, you move on to an interview and then later the final casting process that takes



NT Alum Elizabeth Whitelaw | ABC

place over a course of many weeks.

There were many obstacles before even going on the show, one being the question of who the Bachelor would be.

Before Nick was announced, Whitelaw predicted that the Bachelor would be Robby, Chase, or Luke, three men from JoJo's season.

"I went through months of wondering what my relationship with each of those men would be like," she said. "So, when Nick was announced, I was shocked. But, I figured this was a great opportunity to get to know someone I would normally not pursue had I met him out with friends."

Once on the show, a main disappointment Whitelaw felt was the difficulty in forming a relationship with Nick.

"I felt like Nick didn't get to know me, I didn't get to know him, and with other girls vying for his attention it was difficult to get any time with him."

Although the show presented many challenges, Whitelaw still came out with good friends, a positive attitude, and appreciation for New Trier and how it helped get her where she is today.

"New Trier helped give me the confidence, as a woman, to chase after my ambitions in life; whether it's to start my own app company, blog, or to take an adventure of a lifetime on a reality show."