Des Plaines Valley Region
IT Committee
Final Report - 2021-2022

Note: The DVR IT Committee met twice during the 2021-2022 school year. Both of these meetings were virtual. The first meeting was on November 12, 2021 and the second meeting was on April 19, 2022.

Conference Discussions and Outcomes

Over the course of the school year, members of the committee attended various workshops and meetings. Detail is below:

- [NICE K12 Cybersecurity Conference](#) - Leyden attended this virtual conference. This conference is one of the only available to those who teach cybersecurity K - 12. Leyden learned about cyber.org and US Cyber Range at this conference, which is now what is being used for Leyden Cybersecurity.

- [CSTA](#) - Ridgewood mentioned that this conference is getting bigger and bigger and is a great opportunity for computer science teachers to collaborate. The 2022 conference will be in July in Chicago so it is a good local opportunity for DVR teachers to attend. The focus will be on scaling computer science for high school students.

- **Harper College - Technology Sector** - Triton attended this conference which focused on what employers of IT are looking for. Much of the emphasis is on Cloud Services and Cybersecurity. This is good for our DVR partners to know as we continue to look at the curriculum.

- **CABEA** - The Chicago Area Business Educators Association Conference was hosted at East Leyden on April 29, 2022. Several members attended the presentation. The major benefit was roundtable discussions with others who taught technology outside of our member committee.

Based on professional development and learning, the members of this committee are continually looking for ways to get IT students employable - with skills - sooner. The professional development attended continues to stress the need for skills over degrees. This is a continual conversation of this committee.

Certification Developments

Given the knowledge that certification and skills will usually trump degrees in the IT field, the committee continued to focus on areas in which we can get students into the workplace faster. Some developments include:

- Triton has moved to a new class to cover the CompTIA IT Fundamentals test (CIS 102). The curriculum is largely based on the test objectives. This test is a logical next step to

the CompTIA A+ certification. At the end of the class, there is an option to sit for the exam.

- Triton has streamlined their Cisco sequence with the object of getting students CCNA certified.

- Leyden has combined their use of US Cyber Range and the cyber.org curriculum to prepare students for the CompTIA Security+ exam. The curriculum lists objectives for the exam for each lesson and lab.

- Leyden has started offering Google IT Certification in addition to MOS certification and CompTIA certification. This certification is one of the only where a final test is not needed to obtain the certification. Leyden has about 20 students district wide that are attempting this certification.

Coding and Programming Developments

- As a result of these meetings, Ridgewood and Leyden started using *Carnegie Mellon Python*. Ridgewood started using this curriculum as a guide when school was remote/hybrid. Leyden started using the curriculum this Fall. Because the curriculum is more graphics based, students get a better understanding of coding/programming without the terminal based interface. Most students and teachers agreed that getting students through four (4) units of this curriculum gives them a better understanding of coding fundamentals (conditional statements, loops and net handling). Ridgewood mentioned that they use Project STEM and Elmwood Park stated they use Tinker, which offers free Python training with 14 lessons.
- Leyden will pilot Game Guru/Horizon Worlds in their courses in 22-23. Leyden has been using Fusion to teach game design for the last 5-6 years. While they will continue to use Fusion, they will move on to Game Guru and Horizon Worlds to provide more graphical results and representation for students (links above). Both Leyden and Ridgewood continue to use Unity for advanced students with mixed results. Ridgewood also uses Pygame and Pi Zero which are all on the Raspberry Pi, both are free and available. Earsketch was also mentioned as an option for students who like to create music.
- Leyden is also making a move from Raspberry Pi units/instruction to Adafruit units/instruction.

Cybersecurity Developments

- Leyden has moved to the cyber.org curriculum combined with the use of US Cyber Range. US Cyber Range allows students to work in Kali Linux in a "sandbox" environment where no damage or issues can be done to networks or actual PCs. Students work through various labs addressing common computer security issues. In the first year, students have been enjoying the curriculum and hands-on work. The cyber.org curriculum ties back to the CompTIA Security + exam. In fact, every lab states the objective and content area that is covered on the exam. Leyden is now working with students to tie this back to sitting for this exam in hopes of more certified students.

Looking Forward

Through the year, members discussed some of the current technology trends based on reading and discussions with outside advisory boards. All schools understand and realize that they need to be continual learners to ensure they are providing the most relevant content. Subjects discussed:

- How to start a career in cybersecurity
- The current report produced by CompTIA (Cyberstates) that addresses the current marketplace
- How to increase female representation in technical classes
- The current job recovery due to the pandemic
- Cybersecurity Externships for High School Students
- The current state of IT staffing and demand

Members discussed the struggle to find professional development in emerging areas where we can keep curriculum relevant for students.

Respectfully Submitted,

Tony Pecucci
Business/IT Committee Chairperson