Mrs. De Leon

I have been married for 25 years and have 3 children: Isabella (22), Jonathan (19) and Amaris (9)

Math educator for 16 years: San Elizario (2) and El Dorado HS (14)

Current position: Socorro ISD – Pebble Hills HS teaching Engineering and Math

I have taught all math subjects: Alg. 1 & 2, Geometry, Precalculus and AP Calculus
Cybersecurity

Technology in schools - students exposed to a variety of online risks.
Learning about these risks allows students to make informed decisions about online behavior.

Cybersecurity in education is necessary to protect against financial loss and prevent disruption.

Role - to inform and learn how to protect ourselves from cyber threats.
Knowledge - basic principles of a network and network security, Prepared- teach our students how to protect their digital assets and data.
Cybersecurity Project

**Firewall:** importance, how to configure a Windows firewall and using VPN for secure browsing

**IDS vs IPS:** (detection versus prevention) importance of both to protect assets on server, use of tools like Wireshark to monitor network traffic

**Cyber Hygiene:** importance of a strong password, perform regular system updates, recognize phishing attempts
Cybersecurity - Relevance

1.
Teaching mathematics - teach cyber safety such as data models/regression to interpret cyber attacks
Permutations and/or cryptography to create unique password

2.
Integration into mathematics – teach permutations so students create strong password,
Data sets to perform a regression and be able to interpret data
Geometry Unit 10: Probability (MP4 week 3 ~4/1/2023)

• TEKS: (G13.A) Students will develop strategies to use permutations and combinations.

• Connection: Students will learn and develop strategies to use permutations to create a unique password to protect from cyber threats.

• Overview of the importance of cyber-safety and shown tools to protect their assets.

• Show students the value of creating a strong password
Topic: Probability – Permutations and combinations (1 week)

Introduce with short video along with whole class activities for guessing common passwords

Students will learn about cyber safety, explore password safety and they will create their own strong password

End with students creating their own unique password and check its strength
CREEDS Takeaways

• Importance of cybersecurity in school curriculum to inform students and educators
• Study of data sets and use python for analyzing to be able to protect valuable assets
• Use of python programming in mathematics classroom to visualize data and computing equations in geometry
Conclusion

• Technology has such a vital role so the importance of cybersecurity cannot be over-emphasized

• Students/Educators need to protect assets by installing firewalls and malware protection

• Cybersecurity awareness for students is to make them aware of threats and risks along with being secured with a strong password.