Incorporating Cyber Competencies in K-12

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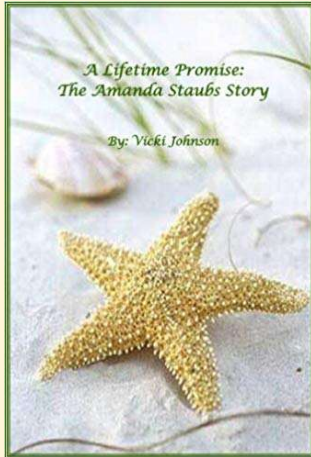
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Presenter Resume

At just 15, Rachel Stange was presenting at her first international education technology conference on using an LMS for K-12 outreach. She has presented at ACM and IEEE conferences on multidiscipline topics and at the Community College Cyber Summit. She started publishing her research while still in high school. Rachel has received state and national awards from the National Center for Women & Information Technology for her computer science work. She holds a Pre-Allied Health certificate and Associates of Science degree from Lord Fairfax Community College and is currently working on her Bachelor Degree in Professional Chemistry with a double minor in Computer Science and Cybersecurity.

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Mother cites bullying for daughter's suicide

Bullying in school played a major part in the suicide of a 13-year-old Stephens City girl earlier this week, her mother said Friday.

By The Northern Virginia Daily   May 31, 2012

Bullying in school played a major part in the suicide of a 13-year-old Stephens City girl earlier this week, her mother said Friday.

The woman's voice broke as she described her daughter as "very smart, loving, caring, a helper, and a friend."

"Her dad and I are devastated," she added.

The Northern Virginia Daily's policy is not to report on suicides, except when the information is already widely known and likely to be of unusual interest to much of the community.

The girl's mother said it was clear months ago that something was troubling her daughter.

A Lifetime Promise: The Amanda Staubs Story
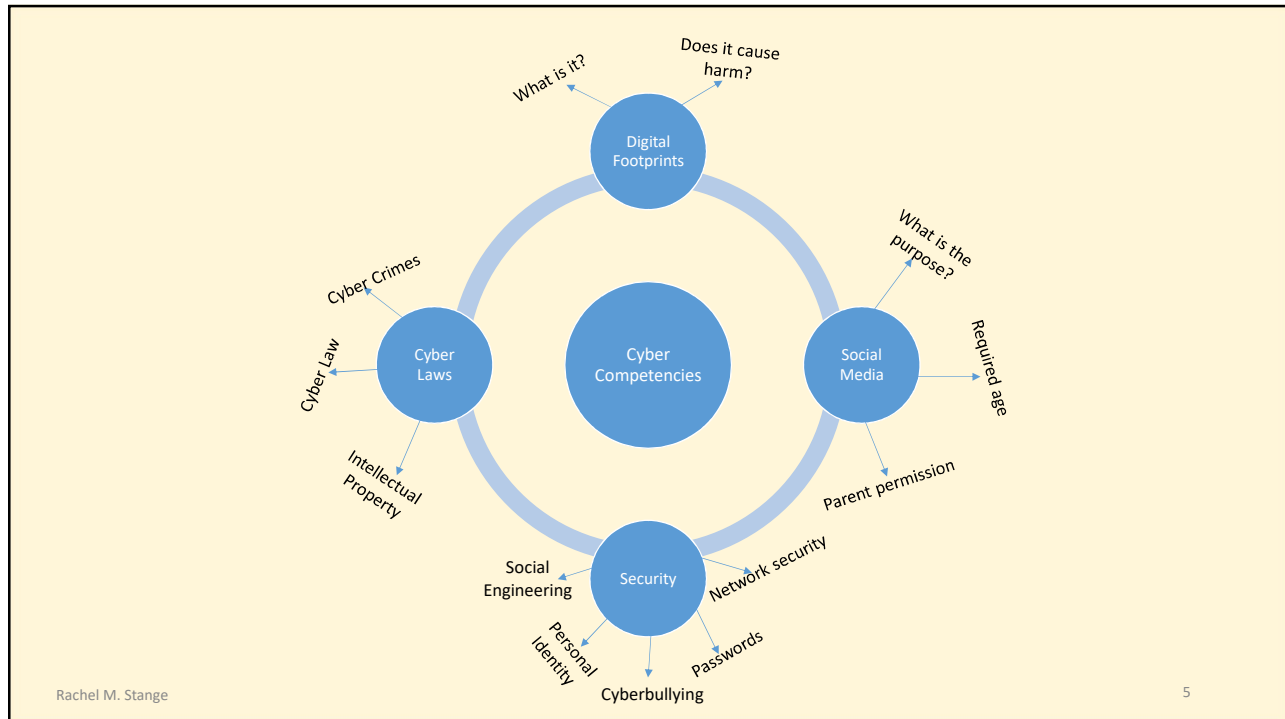By: Vicki Johnson

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GEN Z   GEN Y

- Born between 1996 and 2010
- Acquiring more than $44 billion in purchasing power & making up 25.9% of the population, the largest percentage in the U.S.
- Has 12 seconds less of the attention span recorded in 2000, coming in at 8 seconds.
- Thinks spatially and in multiple dimensions
- 54% percent are Googling themselves regularly, with 10% self-searching on a daily basis
- 92% of Gen Z has a digital footprint

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What is it?

Does it cause harm?

Digital Footprints

What is the purpose?

Cyber Crimes

Cyber Law

Cyber Laws

Cyber Competencies

Social Media

Required age

Intellectual Property

Parent permission

Social Engineering

Security

Network security

Personal Identity

Passwords

Cyberbullying

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Digital Footprint Competency

1. Don't be a DIGITAL DUMMY: Get real! The Web is **public** and **permanent**
2. Don't be a DIGITAL GOSSIP: Talking about others negatively, makes you look shallow
3. Don't be DIGITAL WEAK SAUCE: Don't let friends influence your better judgment
4. Don't be a DIGITAL DIVA/DIVO: Inappropriate screen names/pictures & legal issues
5. Don't be a DIGITAL DAREDEVIL: Be careful about sites & friends
6. Don't be a DIGITAL CREEPER: Be careful what you download, look at, even for a laugh
7. Don't be a DIGITAL MEAN KID: Don't hide behind your computer
8. Don't be a DIGITAL DORK: Information about you is impossible to remove 100%
9: Don't be a DIGITAL PRIVACY KIDDIE: There are always ways to get around privacy settings

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Social Media Competency

JoJo Siwa

- Fan base is 4-13 year olds that follow her on Instagram & YouTube
- Turns comments off on Instagram after someone posts a bad comment
- Is promoting 4-13 year olds to use social media during TV interviews
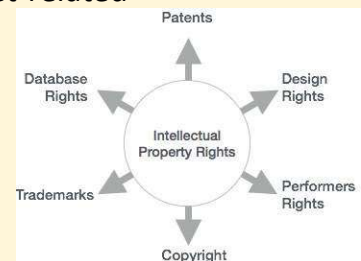
Blue Whale Challenge

- Challenge that is on YouTube
- Human Trafficking
- Participants have a whale on their wrist
- Last challenge is to either run away or kill yourself

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Cyber Law Competency

- Intellectual theft is stealing or using without permission someone else's intellectual property
- Intellectual property is protected by patent for inventions, and copyrights on creative pursuits such as music, photo, poems
- The FTC ruled that Facebook, and other social media sites, may now archive 7 years of a person's online activity
- Give examples like their personal games or program code, and how easily it could be stolen by a hacker, who may declare it as their own.
- Cyber law is any law that applies to the Internet and Internet-related technologies.
- Cyber Crime Categories: People, Property, & Government

Patents

Database Rights

Design Rights

Intellectual Property Rights

Trademarks

Performers Rights

Copyright

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Additional Cyber Competencies

Computer Science	Cybersecurity
• Secure Coding • 7 Big Ideas of CS • Data Analysis • Machine Language/AI • Logical vs. Syntax Errors	• Component Security • Data Security • Software Security • Connection Security • System Security • Human Security • Organizational Security • Societal Security

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Solution

Step 1
• Educators & Staff trained on the cyber competencies
• Educators & Staff trained on identification of cyber distress

Step 2
• Create Cyber Task Force to integrate grade level cyber competencies
• School systems open to students suggestions

Step 3
• Presentation to students need to be cross curricular
• Notify Parents of all required Web usage & offline options

Step 4
• Continuously reevaluate & update cyber plan

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Cyber Resources

- RachelS Online (rachels.online)
- Safe Surfin' Foundation (http://safesurfin.org/)
- Bikers Against Child Abuse (https://bacaworld.org)
- National CyberWatch Center (https://www.nationalcyberwatch.org)
- National Center of Women & IT (https://www.ncwit.org)
- Internet Safety 101 Organization (https://internetsafety101.org)
- VA Cyber Range (https://virginiacyberrange.org)
- StopBullying (https://stopbullying.gov)
- NICE (https://www.k12cybersecurityconference.org/)
- Girl Scouts USA (https://www.girlscouts.org/)
- IBM Cyber Days (https://www.ibm.com/security/news/cyberday-for-girls)

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