CyberMiSTS:

Curriculum to Broaden Participation in Cybersecurity for Middle School Teachers and Students

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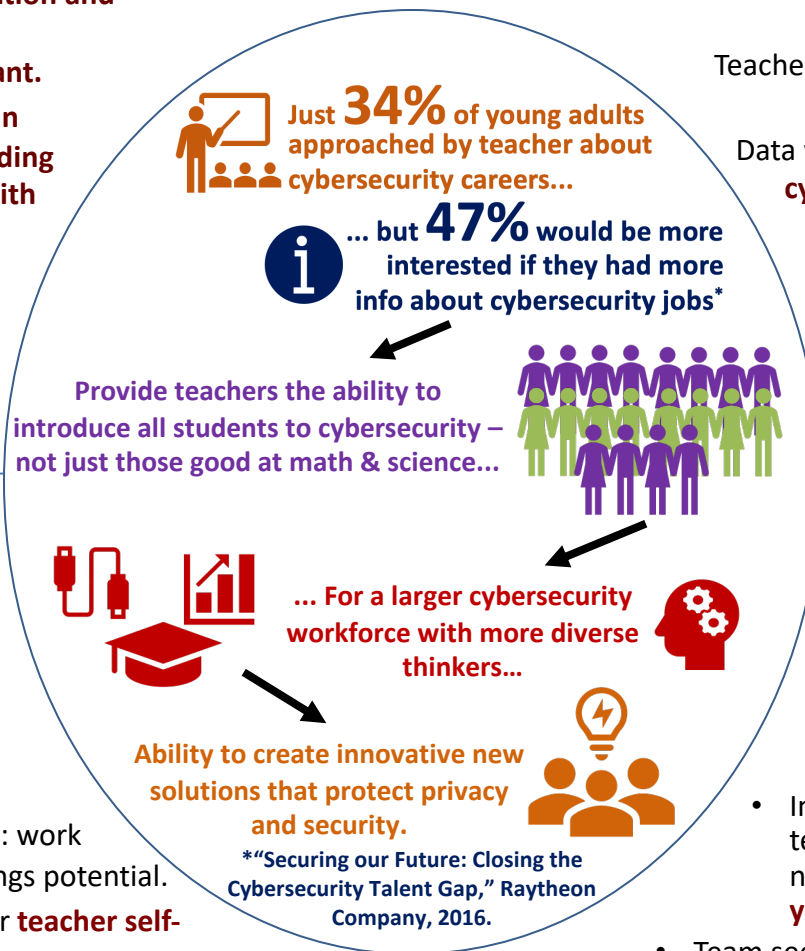Cybersecurity for Middle School Teachers and Students

With increasing adoption of automation and AI, the need for more cybersecurity professionals is increasingly important.

To increase awareness and interest in cybersecurity careers requires providing students meaningful engagement with cybersecurity during middle school.

Teachers need interactive, turnkey cybersecurity curriculum – that doesn't require a computer lab, but does include assessments with answer keys.

Summer workshop for middle school teachers – no prior cybersecurity or coding experience required.

- Teachers create curriculum for their students focused on **key concepts and big questions** with hands on activities like branching webcomics.

- Includes **cybersecurity career info**: work role diversity, pathways and earnings potential.

- Created new survey instrument for **teacher self-efficacy** on cybersecurity concepts.

Just **34%** of young adults approached by teacher about cybersecurity careers...

... but **47%** would be more interested if they had more info about cybersecurity jobs*

Provide teachers the ability to introduce all students to cybersecurity – not just those good at math & science...

... For a larger cybersecurity workforce with more diverse thinkers...

Ability to create innovative new solutions that protect privacy and security.

*"Securing our Future: Closing the Cybersecurity Talent Gap," Raytheon Company, 2016.

Teachers use curriculum in classroom, provide data and feedback to research team.

Data will provide insights into what **works in cybersecurity education** for both middle school students and teachers.

Socialization of middle school students with cybersecurity concepts and careers may improve related skills and attitudes among underrepresented groups.

Increasing number and **diversity of students seeking careers in cybersecurity** is important for the safety and security of our nation.

- Present early outcomes at NICE K12 Conference, December 9, 2019 in Phoenix, AZ.

- Initial CyberMiSTS cohort of nine teachers have the potential of reaching nearly **300 students in just the first year**.

- Team seeks to evolve teacher workshop and curriculum development experience into **online PD for teachers** to scale up and make significant impact.