Office of Digital Teaching & Learning

# Technology Townhall

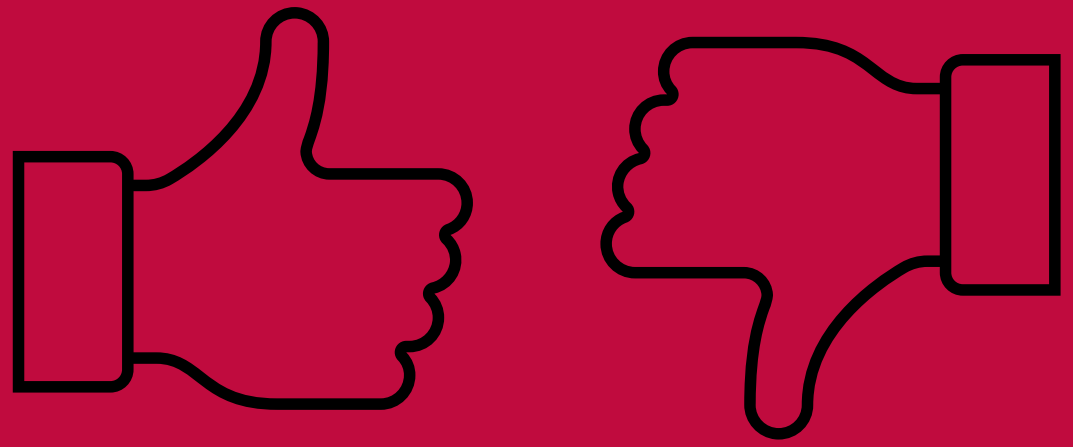
November 2022

# Russell Deneault
Director of Technology, Creighton SD
President Elect, AASBO

# Kelly Krusee
Program Manager
Office of Digital Teaching & Learning

Office of Digital Teaching & Learning

TECHNOLOGY TOWNHALL NOVEMBER 2022



# Virtual chit chat

What does November mean in your world? What are you grateful for?

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# TOWNHALL OBJECTIVES

- Introductions, review of purpose and goals
- Group will learn about:
  - ODTL Updates
  - Cyber Incident Response, ACTIC
  - Cybersecurity Awareness Training, Chandler USD & Fortinet
  - Administration Reports, Sahuarita USD
  - Ed Tech Integration, ADE
- Gather feedback and input from participants

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# Arizona Department of Education Five Year Strategic Plan

**Priority #1: Student Equity and Achievement**

**Priority #2: Educator Recruitment and Retention**

**Priority #3: Safe and Healthy Schools**

**Priority #4: Strategic Funding**

**Priority #5: Strategic Data Use**

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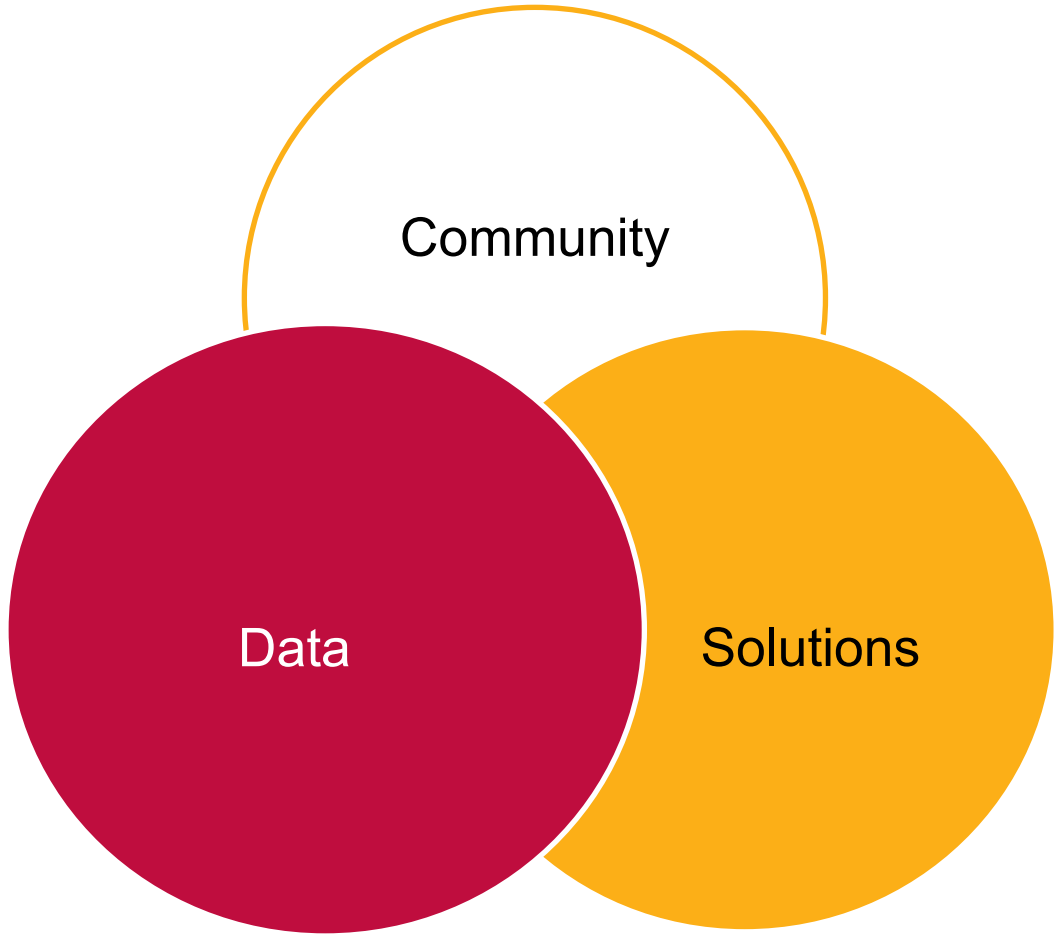
# ODTL Strategic Plan

1. Build Community with Local Education Agencies and solution experts
2. Gather Data / Measure Progress
3. Facilitate Technology Solutions and Resources

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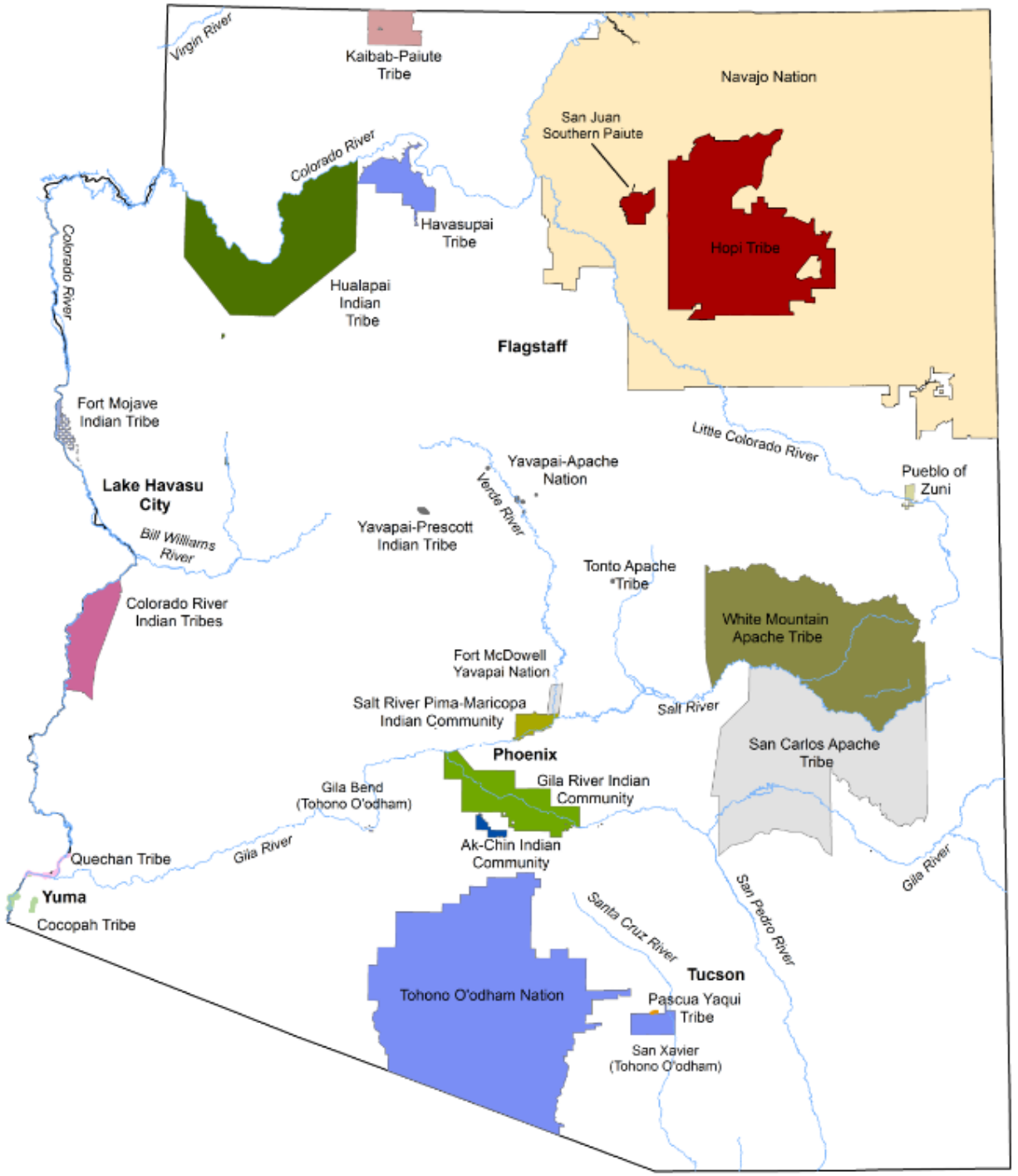


# Native American Heritage Month

- 22 Federally Recognized tribes in Arizona
- Office of Indian Education newsletter and updates include teaching tips, resources

Newsletter: https://www.azed.gov/sites/default/files/2022/11/NAHM%20-%20Newsletter%20%28week%202%29.pdf

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# ODTL Updates

# Solutions to meet your digital needs

1. Cooperative Purchasing Program
2. Cybersecurity Resources

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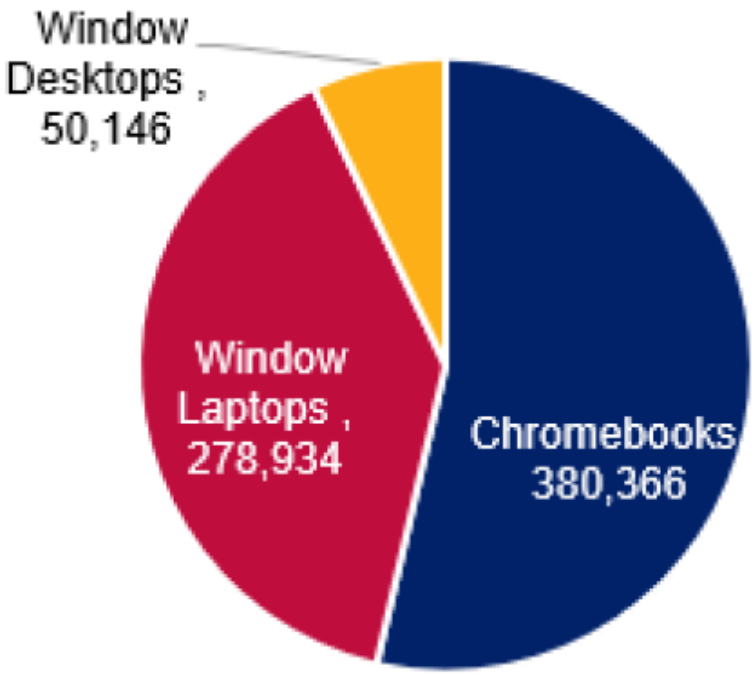
# COOPERATIVE PURCHASING PROGRAM

A suite of solutions that support the overall management of K12 digital devices (laptops, desktops, tablets).

- Windows & Chromebook devices
- Leverage economies of scale with state-wide contracts
- Services include white glove, cybersecurity protection, staging, damage protection and disposal
- Considers the Total Cost of Ownership (purchasing device and operating it)

# COOPERATIVE PURCHASING PROGRAM SURVEY RESULTS




MORE!

**122** Districts and Charter Systems from 14 counties in Arizona expressed interest in the program

On average, responding LEAs plan to purchase, per year:

- 69,000 Chromebook devices
- 30,000 Windows laptops
- 4,800 Windows desktops

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# COOPERATIVE PURCHASING PROGRAM COMMITTEE

Email to get involved:

kelly.krusee@azed.gov

odtl@azed.gov

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# Cybersecurity Resources

- Cyber Readiness Program – Az Dept of Homeland Security
- Cyber Readiness Program Feedback Survey
- Fortinet Cybersecurity Awareness Training for K-12s

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# Community Action

- Technology Townhalls
- Tribal Technology Roundtables
- Digital Office Hours
- LinkedIn

- Digital Office Hours
  - Thursdays each week
  - 11am-1pm MST
  - Special guests, topics weekly

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# We need your help!

- Could these benefit your school or classroom? How?
- What are the biggest challenges and successes at your school?
- How can ADE help?

Technology Townhall November 2022

# Cyber Incident Response:

# *Arizona Counter Terrorism Information Center (ACTIC)*

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# State of Arizona

## Cybersecurity Services Overview

# WHO ARE WE


**Andrew Crotty Sec+ Ce**
Sr. Security Engineer | ACTIC - Cyber Command
Arizona Department of Homeland Security
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**Austin Eakin**
Sr. Info Security Analyst | ACTIC - Cyber Command
Arizona Department of Homeland Security
Work Cell: 623-229-4397
Email: aeakin@azdohs.gov

# Whole-of-State Cybersecurity

| Cyber Command | AZ-ISAC | Cyber Joint Task Force | Statewide Cyber Readiness Grant Program |
|---|---|---|---|

# Department of Homeland Security

## Cyber Command

# Pre/Post Incidents

Varies By
Threat/Attack Type

# True Positive

How can we help you?

# False Positive

Department of Emergency and Military Affairs

# Cyber Joint Task Force

# Feeling Vulnerable

# Open Floor Questions

# Statewide Cyber Readiness Grant Program

- Advanced Endpoint Protection (AEP)
- Multi-Factor Authentication (MFA)
- Web Application Firewall (WAF)
- Converged Endpoint Management (XEM)
- Security Assessments
- K-12 Education

*https://aset.az.gov/programs/cyber-resources-local-and-tribal-governments*

# Statewide Cyber Readiness

+

FEMA

+

+

*https://aset.az.gov/programs/cyber-resources-local-and-tribal-governments*

# Cyber Readiness Grant Program Partners

TANIUM™

CROWDSTRIKE

THALES

CLOUDFLARE®

# Contact us!


**Ryan Murray**

*rmurray@azdohs.gov*

**AZ-ISAC**

*AZ-ISAC@azdps.gov*

**Cyber Readiness Grant Program**

*cybergranttaskforce@azdoa.gov*

# Contact us!


## John McFarland

*JMcFarland@azdps.gov*

## *LTC Les King*

*leslie.e.king6.mil@army.mil*

# Vendor Contacts

- Tanium
  - Bradley Crowe | Regional SLED Account Manager
    bradley.crowe@tanium.com
    720-484-0968

- Thales
  - Joe Bettencourt | Regional Sales Manager-Public Sector
    joseph.bettencourt@thalesgroup.com
    650-649-8574

# Vendor Contacts

- Cloudflare
  - Chloe Medosch | Customer Success Manager
    cmedosch@cloudflare.com
    562-243-4894

- Crowdstrike
  - Mary Farrelly | Regional Sales Manager
    mary.farrelly@crowdstrike.com
    310-683-9968

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# Cybersecurity Awareness Training

## *Fortinet & Chandler Unified SD*

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# Free Security Awareness and Training Service for Education Sector (K-12)

Mark Kelly

kmark@fortinet.com

Major Account Manager

# The White House National Cyber Workforce and Education Summit

**July 2022**

“The event focused on building our Nation’s cyber workforce, improving skills-based pathways to cyber jobs, educating Americans so that they have the skills they need to thrive in our increasingly digital society, and improving Diversity, Equity, Inclusion, and Accessibility (DEIA) in the cyber field. Bringing together entities who employ, train, and educate cyber professionals and Americans at large, the event involved senior U.S. Government officials, senior executives from the private sector, and thought leaders from across the cyber community and the education sector.”

White House Fact Sheet: https://www.whitehouse.gov/briefing-room/statements-releases/2022/07/21/fact-sheet-national-cyber-workforce-and-education-summit/

THE WHITE HOUSE

National Cyber Workforce and Education Summit

July 2022

# Fortinet’s announcement at the White House National Cyber Workforce and Education Summit

## Fortinet is making the new Fortinet Security Awareness and Training service available for free to K-12 schools across the U.S.

“The expansion of its free training offerings provides the potential to help **more than 8 million staff and faculty members in U.S. schools** become more cyber aware and improve their skillsets to avoid breaches at educational institutions.”

Fortinet Press Release: https://investor.fortinet.com/news-releases/news-release-details/fortinet-announces-free-training-offering-schools-white-house

FORTINET

July 19, 2022 at 9:00 AM EDT

Fortinet Announces Free Training Offering for Schools at White House National Cyber Workforce and Education Summit

**Free Training Service for more than 8 Million Staff and Faculty Across U.S. School Districts will Advance Fortinet’s Mission to Close the Cyber Skills Gap**

SUNNYVALE, Calif., July 19, 2022 (GLOBE NEWSWIRE) --

**Sandra Wheatley, Senior Vice President, Customer Marketing, Threat Intelligence and Global Influencer Communications at Fortinet**

“Fortinet is proud to participate in the White House National Cyber Workforce and Education Summit to share our expertise and insight based upon our longstanding dedication to closing the cyber skills gap through cross sector collaborations and dialogue. Since the establishment of the Fortinet Training Institute in 2016 and through our Training Advancement Agenda (TAA) initiatives, Fortinet continues to make cybersecurity opportunities accessible to more people, including populations who are often overlooked such as women, minorities and veterans, through training. Today, as part of our pledge to train 1 million people in cybersecurity across the next five years, Fortinet announced a new free training offering to help combat attacks on our educational institutions.”

# The Need

# Individual Awareness is Low

In the last 12 months, the “human element” has been involved in

**85%**

of breaches, and in nearly half of them (36%) phishing was the primary mode of attack.

Gartner®, Market Guide for Security Awareness Computer-Based Training, Richard Addiscott, Claude Mandy, William Candrick, 26 July 2021

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Which of the following barriers inhibit your school from adequately defending against cyber threats?

**46%**

Lack of skilled personnel

**43%**

Low security awareness among employees

Cybersecurity Insiders:

FORTINET 2021 APPLICATION SECURITY REPORT

# What’s Included

# What’s Included: Premium Service

Created by the Fortinet Training Institute, the Fortinet Security Awareness and Training service helps schools build a cyber-aware culture where teachers and staff can recognize and avoid falling victim to cyberattacks.

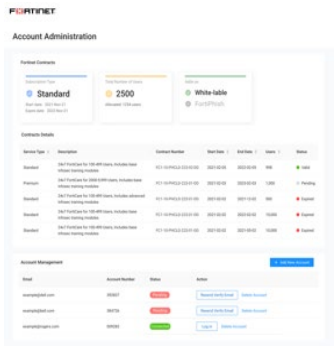
## Purpose-built aligned to NIST-800-50 and NIST 800-16 Guidelines

FORTINET

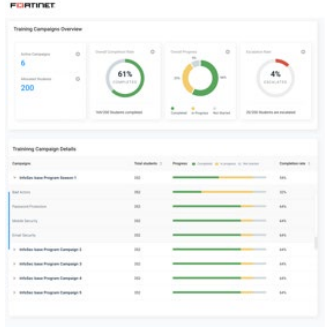
Designed by Security Experts

**High Quality Security Training**

**Engaging Communication & Reinforcement Resources**




**Easy to Use Administration & Management**



**Active Monitoring & Reporting**

Your Brand Here

**Co-branded for your district**

# Training tailored to the Education Sector

## Lesson Objectives

- Describe the risks associated with social media
- Understand some of the common vulnerabilities associated with social media
- List actions that you can take to secure your social media accounts

## Key Concepts

### Offline Risks

**Home Security**

Your home security can be at risk due to the content that you share on social media.

If you post content related to when you're going on vacation, trip photos, or tag locations in your posts, a bad actor can determine when you're away from home and use that opportunity to compromise your home security.

# Education Focused Communication Resources

Reinforce key teachings from training modules

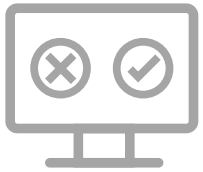
Banners – various sizes

Screen Savers – 6 versions

Posters – 6 versions

Tip Sheets - 2 versions

# Key Benefits

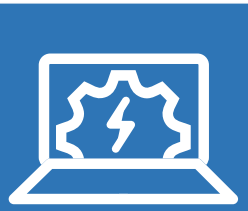


Train faculty and staff to recognize and report on potential security threats in email, online or in a physical setting.

Reduce the costs and strain on security and IT in managing infections and removing malware.

Prevent the impact of breaches caused by faculty and staff errors and poor judgment.

Create a security-compliant culture.



Ensure faculty and staff are aware of data privacy and security and are motivated to protect personally identifiable information and other sensitive data types.

**Colleen Flannery**

**Chief Technology Officer**

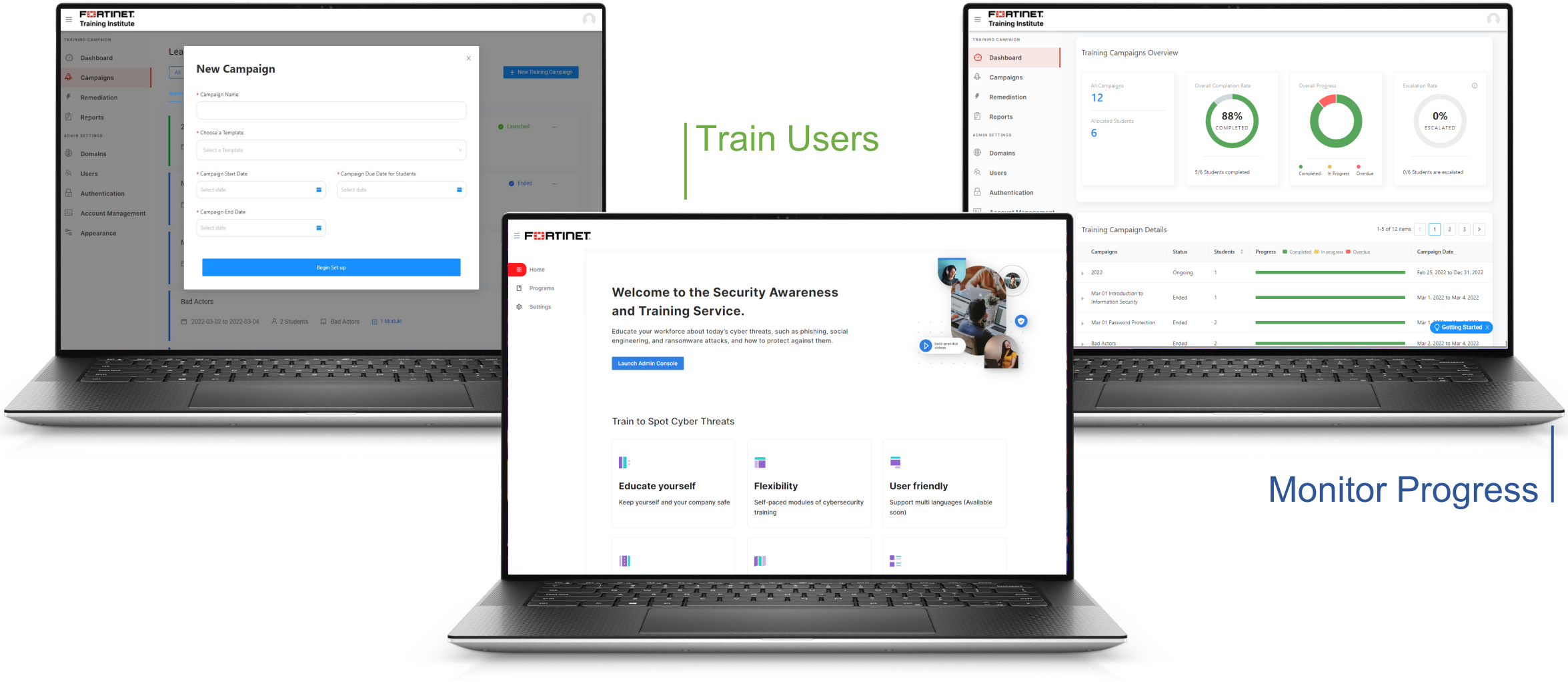
# About the Service

# Fortinet Security Awareness and Training Service

## Build Campaigns

## Train Users

## Monitor Progress



# Service Features

| | STANDARD | PREMIUM |
|---|---|---|
| **HIGH QUALITY SECURITY AWARENESS AND TRAINING ALIGNED WITH NIST 800-50 \| NIST 800-16** | | |
| Base Training Modules | 7 base modules | 23 base modules |
| Micro Training Modules | 5 micro modules | 10 micro modules |
| Nano Learning Videos | 7 nano videos | 18 nano videos |
| Learning Reinforcement Resources: Posters, Banners, Tip Sheets, etc. | ✓ | ✓ |
| Role-based Training for End-users, Managers and Executives | ✓ | ✓ |
| **ADMINISTRATION AND MANAGEMENT** | | |
| Planning and Deployment Training for Admins | ✓ | ✓ |
| Quarterly Top Threat Signals Report for Admins (Powered by FortiGuard Labs) | ✓ | ✓ |
| Create, Update and Deactivate Users Manually or with an Import File | ✓ | ✓ |
| Two-Factor Authentication (2FA) | ✓ | ✓ |
| LDAP Integration | | ✓ |
| Single Sign-On (SSO) | | ✓ |
| Co-branding | | ✓ |
| Role-based Hierarchical Registration | | ✓ |
| **MONITORING AND REPORTING** | | |
| Up-to-date Dashboard of User Activity | ✓ | ✓ |
| Out of the Box Reports for Admins and Executives | ✓ | ✓ |
| Flexible Report Builder for Custom Reporting | ✓ | ✓ |
| Schedule and Export Reports | ✓ | ✓ |

# Awareness Resource Topics

## Nano Videos

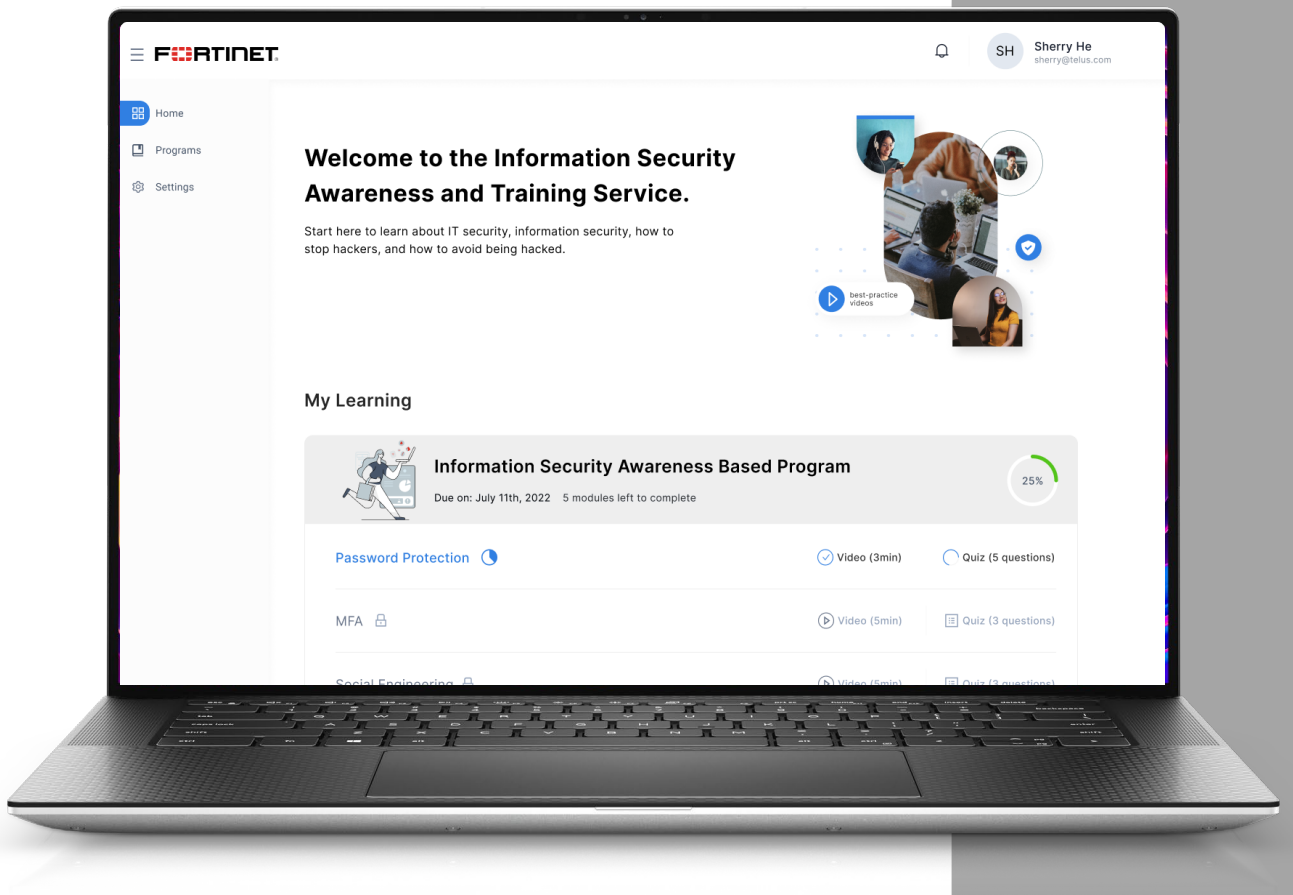
- Shoulder Surfing
- Tailgating
- See Something, Hear Something, Say Something
- Follow Company Policy
- Avoid Unknown Wi-Fi Networks
- Good Password Hygiene
- Think Before You Click
- Web Conference Tips
- Travel Tips
- Back Up Your Data
- Data Disposal
- Disable Automatic Wi-Fi
- Encrypt Sensitive Data
- Enable Screen Locks
- Update Your Software
- Protect Your Devices
- Non-discoverable Bluetooth
- Use Multi-Factor Authentication

## Posters, Tip Sheets and Screensavers

- Be Aware No Tailgating
- Lock Before You Leave
- See Something, Hear Something, Say Something
- Don't Be Too Quick to Click
- Free Wi-Fi Comes with a Price
- Be Unique Your Login Credentials Are Keys for Cyber Criminals
- Insider Threats
- Mobile Security

# Learner Portal and Administrative Console

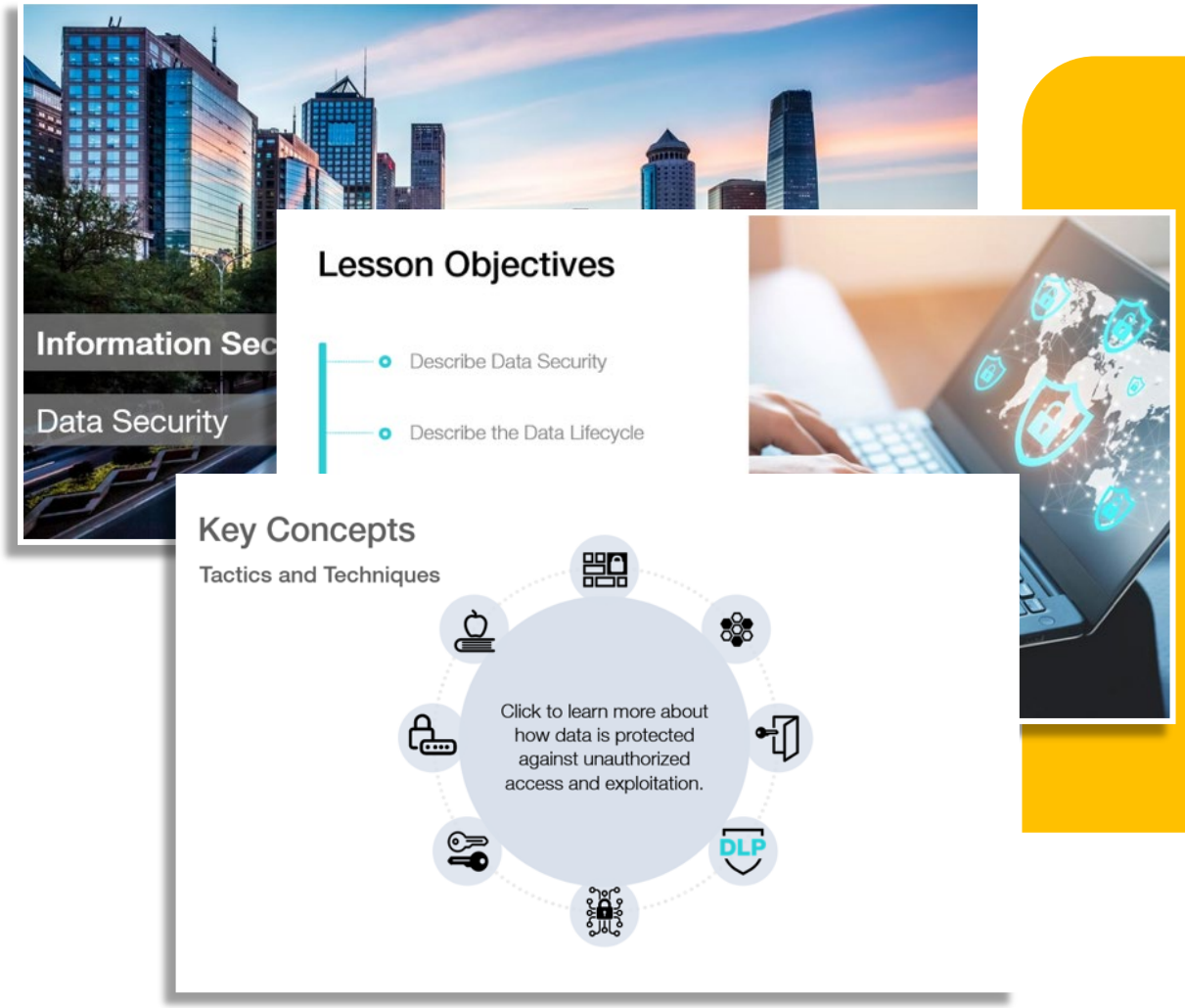
# Learner Portal




- Learners can view:
  - The modules they need to take
  - Their status as they progress through the modules
  - The modules that are over-due
  - The mandatory quizzes
  - A list of completed training modules on PC, Tablet or Mobile
- Admins can:
  - Customize the program using existing templates
  - Customize welcome or program introduction message
  - Schedule programs with start, end, and due

# Training Modules & Videos

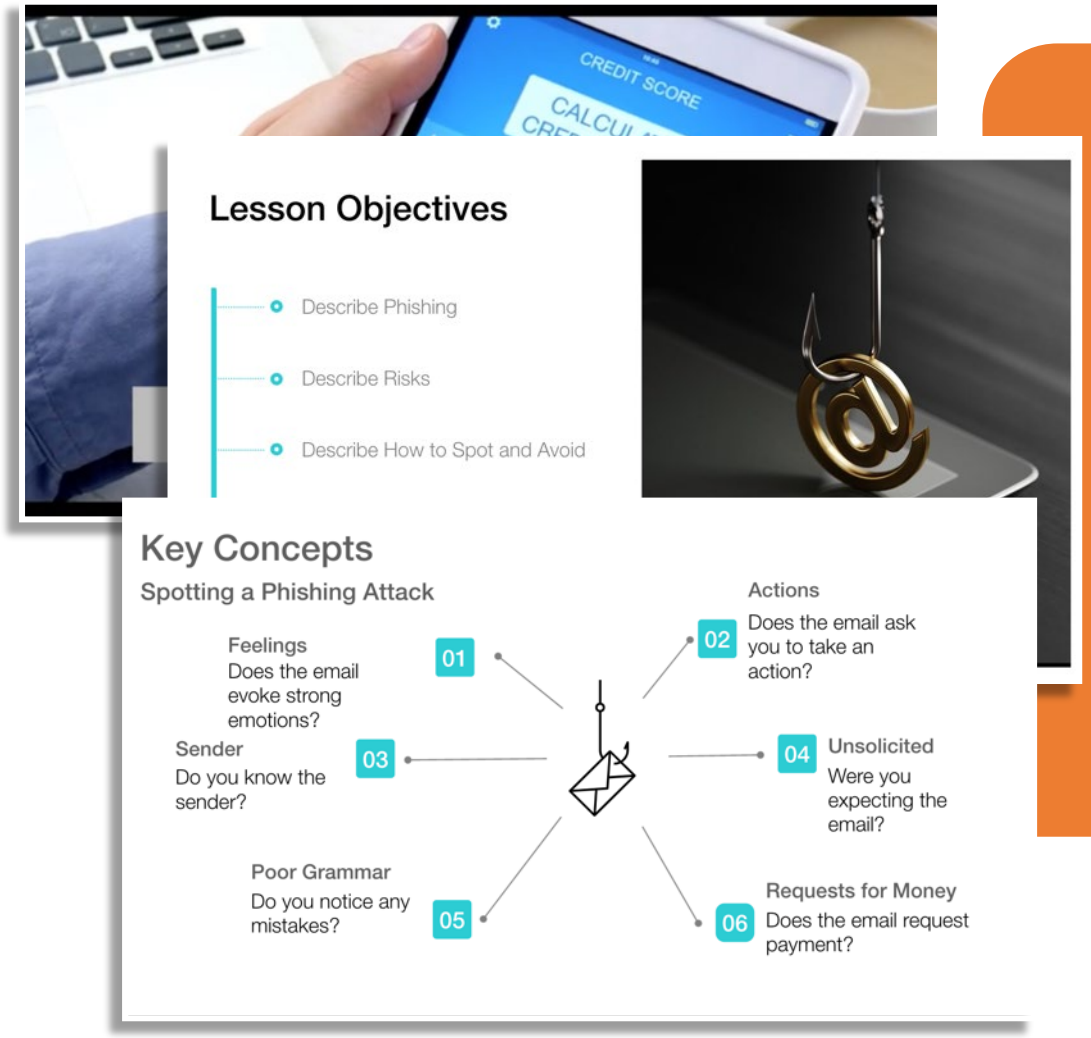
## Multi-Modal Learning




- Training in multiple formats to appeal to different learning styles: video, text, images, audio, animation
- Training modules cover Security Awareness, Data Privacy, Internet Security, Password Protection and Physical Security
- Training addresses the information security needs for GDPR, PCI DSS, SOC 2, PIPEDA, CCPA, ISO/IEC 27001
- Interactive quizzes and knowledge checks
- Base modules, micro training and nano training - introduce, engage, re-engage and reinforce—train throughout the year

# Engage Employees with Effective Training

Created by a team Fortinet security and training experts.



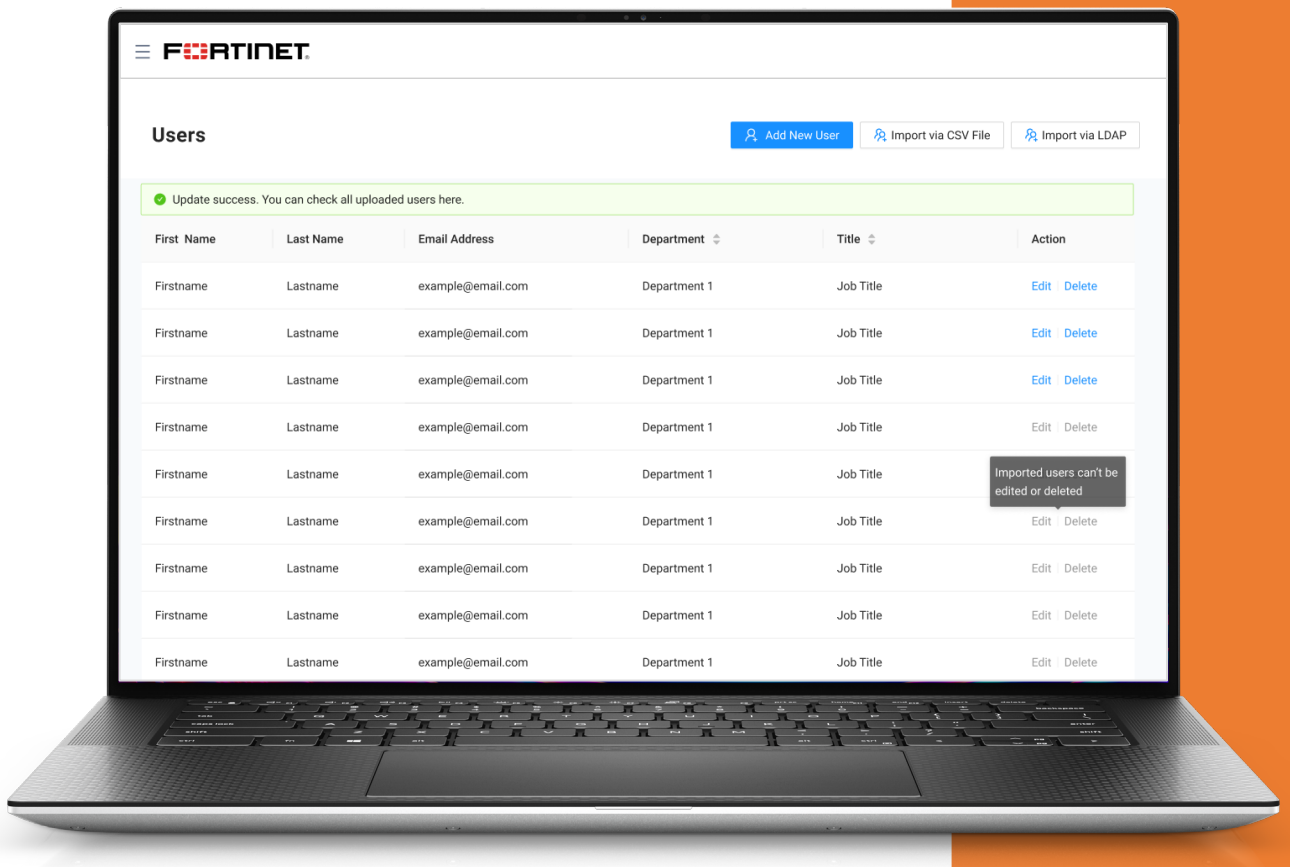

Created by the award-winning Fortinet Training Institute

- Over  a million certifications issued
- Team of security experts, e-learning developers and trainers created the solution following proven adult learning methodology

Training modules are high quality, focused, market-driven and responsive

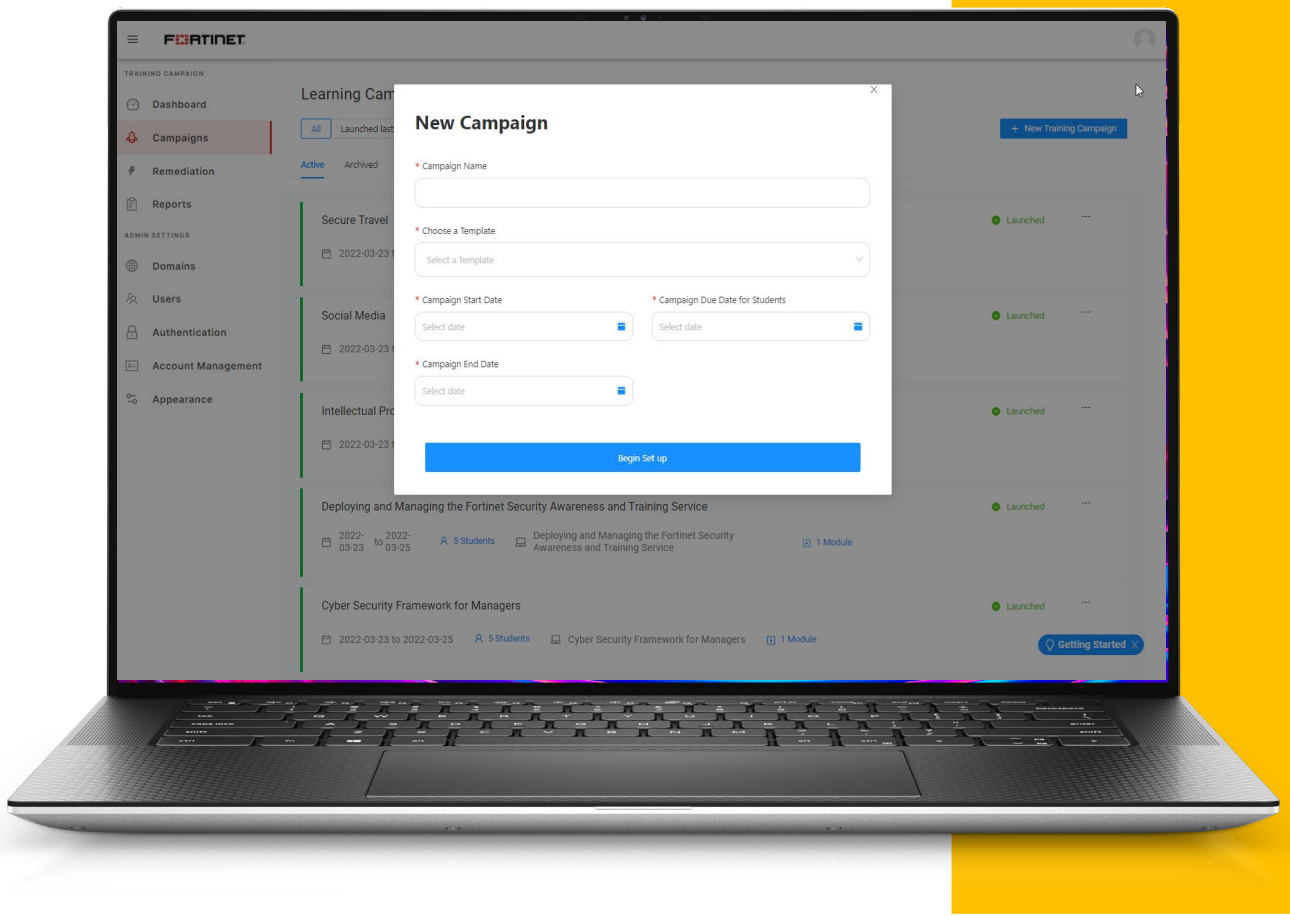
- Solution is purpose-built to address customer need while removing all the excess that makes other solutions expensive and cumbersome to deploy

# Admin: User Provisioning & Management



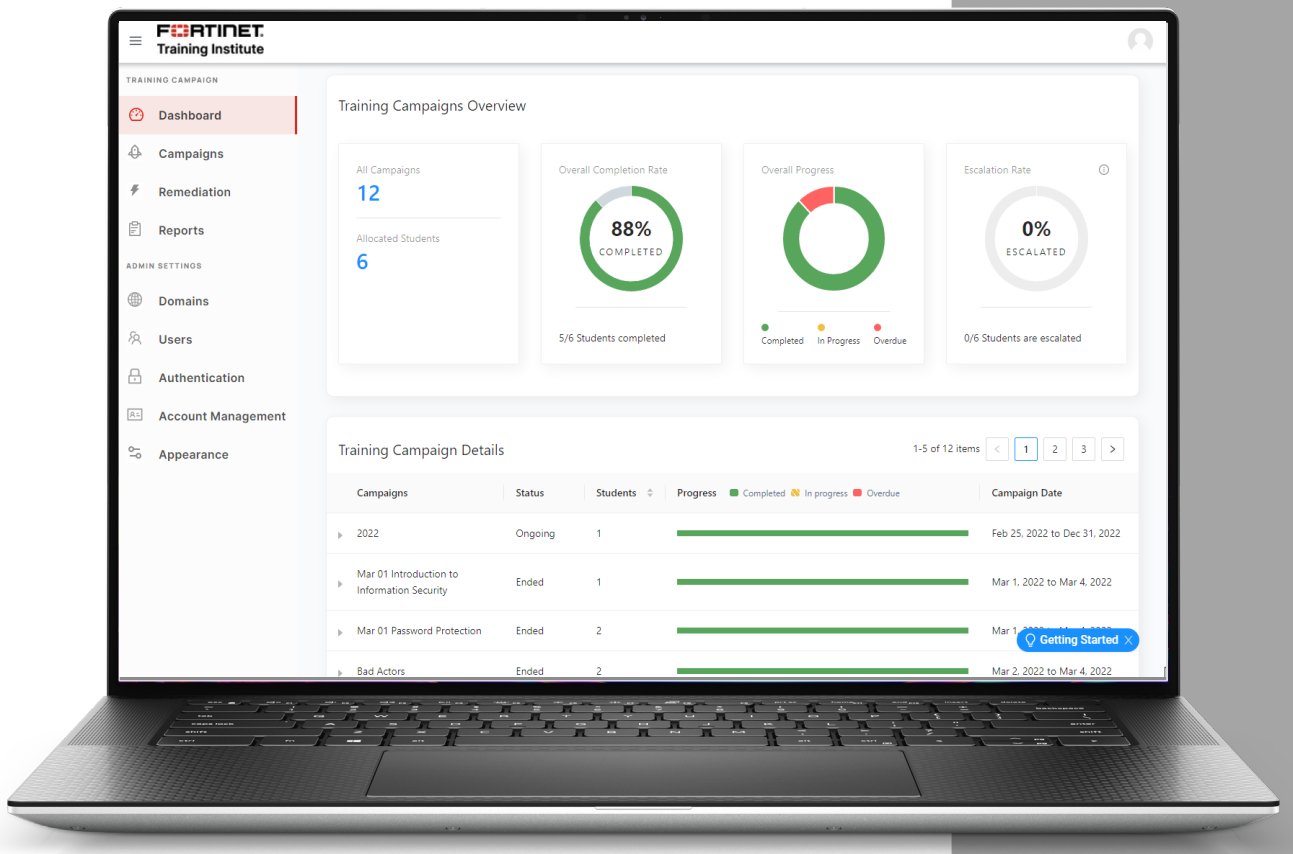

- Create, update or manage users manually, with an import file or LDAP integration
- Role-based hierarchical registration with manager roles
- Single-Sign-On
- Two-factor authentication (2FA)

# Campaign Builder




- Build custom campaigns with selected training modules that will address the needs of the organization
- Getting started, reminder, and course completion emails for learners
- Set-up automation triggers for getting started, re-engagement and remediation training for learners

# Admin: Monitoring and Reporting




- Up-to-date dashboard of user activity
- Out of box reports available in pdf format:
  - Individual campaign report
  - Report weekly, monthly or at campaign completion
- Campaign Report for Executives
  - Summary of all campaigns
  - Overall completion rate
  - Progress of all campaigns
- A report builder gives admins the power to create custom reports

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# Common Practices: Administration Reports

## *Sahuarita Unified School District*

Office of Digital Teaching & Learning

Technology Townhall October 2022

# Ed Tech Integration and Resources from ADE

*Alecia Henderson, Computer Science/Ed Tech Specialist*

Office of Digital Teaching & Learning

# *Welcome!*

# ABOUT ME


**ALECIA HENDERSON**

K-12 ACADEMIC STANDARDS

COMPUTER SCIENCE & EDUCATIONAL TECHNOLOGY SPECIALIST

ALECIA.HENDERSON@AZED.GOV

Arizona Department of Education

# What's New with the AZ Educational Technology Standards?!

# Standards

**Standards: What a student needs to know, understand, and be able to do by the end of each grade.**

**Standards build across grade levels in a progression of increasing understanding and through a range of cognitive demand levels.**

**Standards are adopted at the state level by the State Board of Education.**

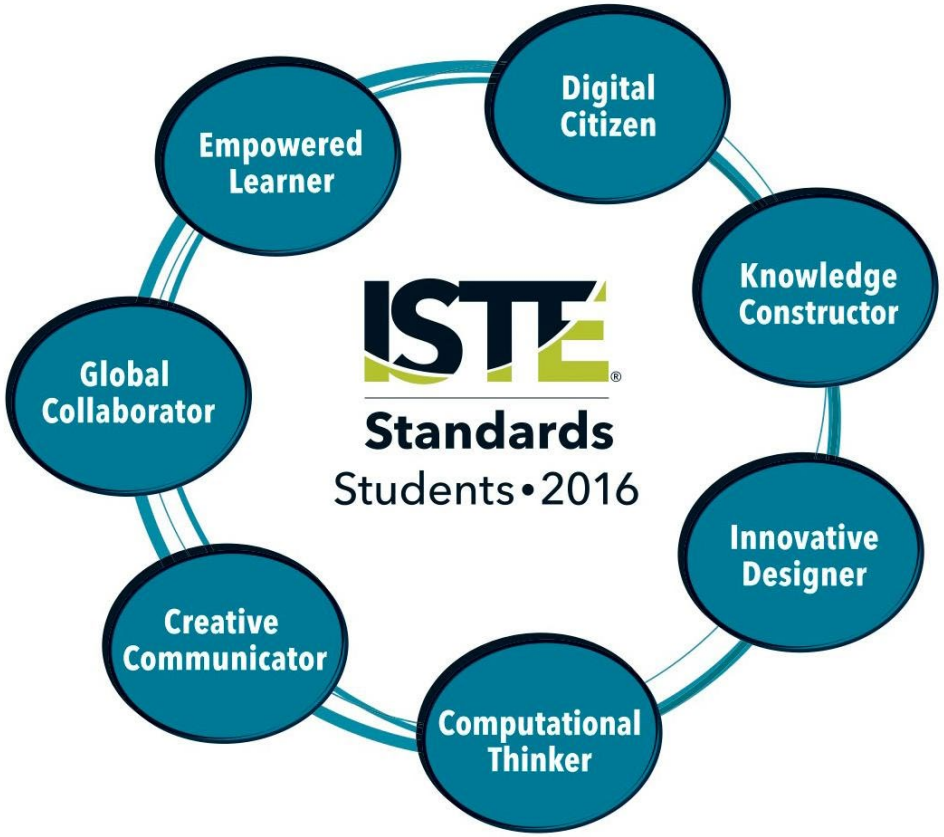
# Educational Technology Standards

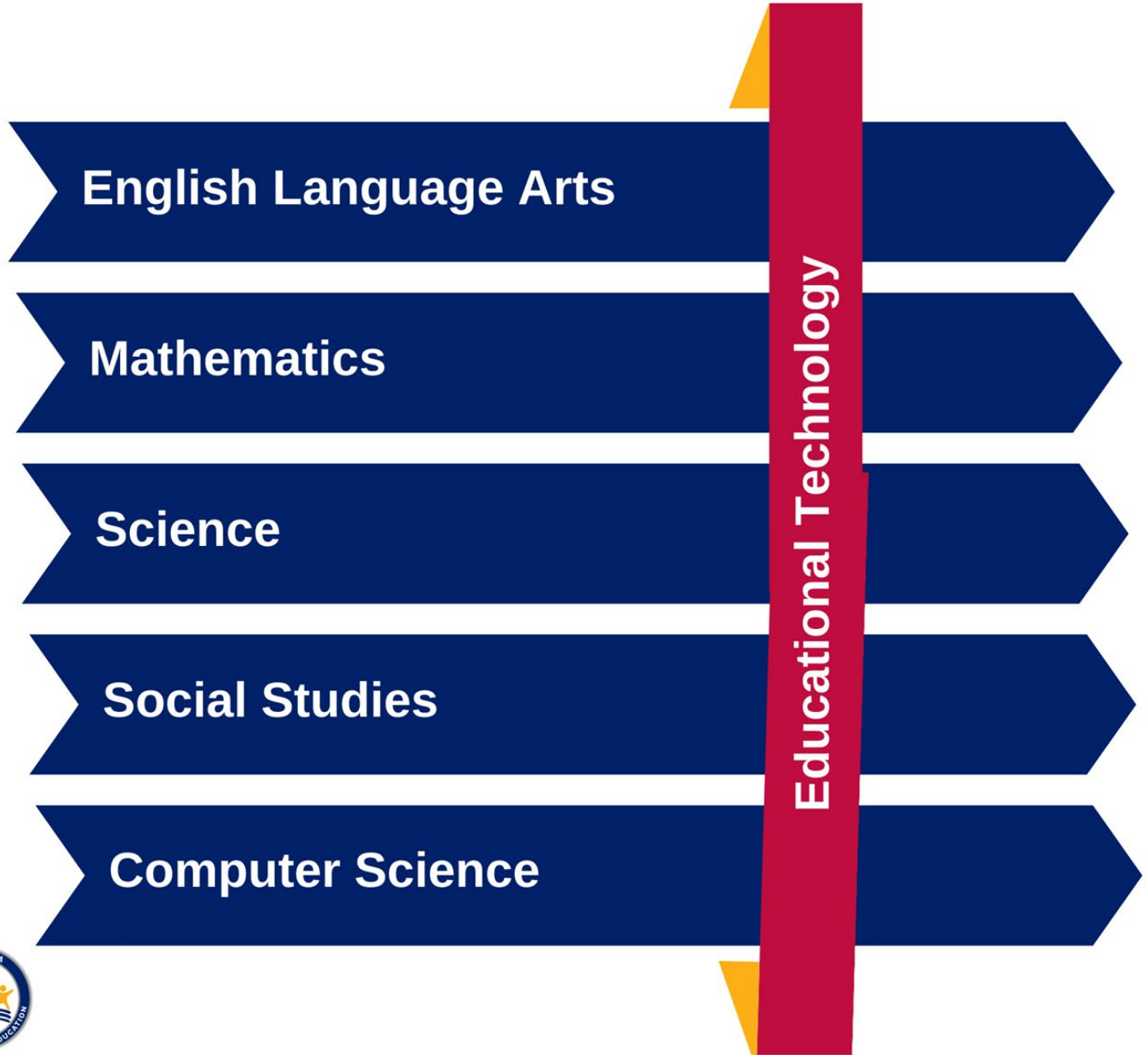
## Foundational Resources:

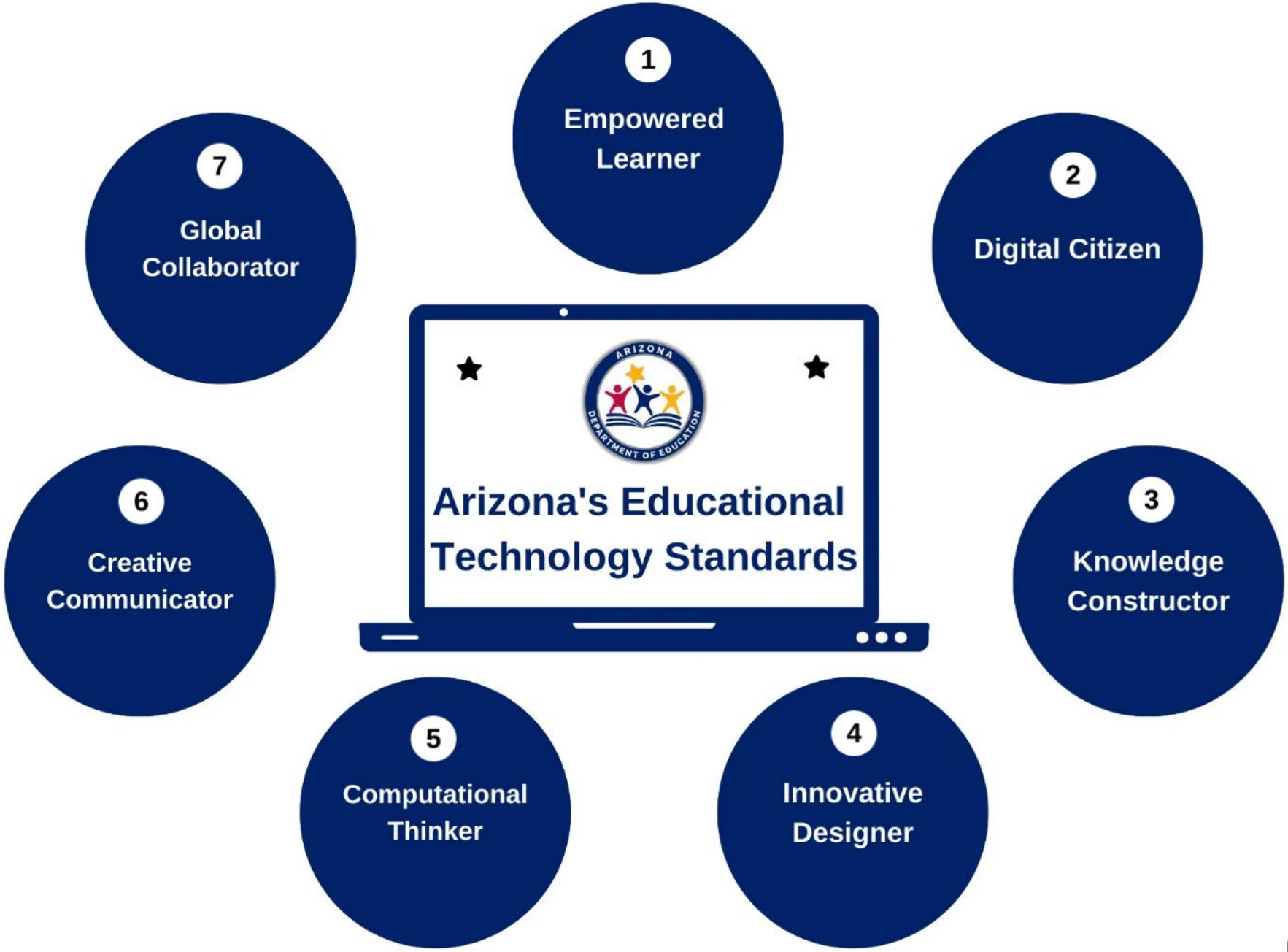
1. ISTE Standards for Students
2. Washington Educational Technology Standards
3. Wisconsin Educational Technology Standards
4. Wyoming Educational Technology Standards

## Structure:

1. K-12 Standard (7 Standards)
2. Grade-band Indicators
3. Grade-band Sample Student Performances
4. Vertical Progression




English Language Arts
Mathematics
Science
Social Studies
Computer Science
Educational Technology


1
Empowered Learner
2
Digital Citizen
3
Knowledge Constructor
4
Innovative Designer
5
Computational Thinker
6
Creative Communicator
7
Global Collaborator
Arizona's Educational Technology Standards

# *Standard 5:*
# COMPUTATIONAL THINKER

## What do you think of when you hear the words "Computational Thinker"?

# *Standard 5:*
# COMPUTATIONAL THINKER

Students develop and employ **strategies** for **understanding** and **solving problems** in ways that leverage the power of **technological methods** to **develop** and **test solutions**.

5A | 5B | 5C | 5D

# What is computational thinking?

| Computer Science | Computational Thinking |
| --- | --- |
| • Focused on understanding how and why computers work, the creation of new technologies, and the impact of these creations on society.<br>• Includes the algorithmic design process in both hardware and software | • An interdisciplinary problem solving process<br>• Formulating problems in a way that can be understood and solved by both machines & humans<br>• Representing data through models and/or simulations<br>• Involves decomposition, abstraction, pattern recognition, and algorithmic design |

# Standard 5: Computational Thinker

**Standard 5. Computational Thinker -** Students develop and employ **strategies** for **understanding and solving problems** in ways that leverage the power of **technological methods** to **develop and test solutions**.

computational thinking ≠ computer science

# What is computational thinking?

| Element | Description |
| --- | --- |
| Element 1: Decomposition | • Breaking down complex problems into smaller, more manageable parts<br>1. Start by having students break down a simple task they do all the time (i.e. brushing their teeth)<br>2. Introduce them to more complex problems/scenarios that are unfamiliar and engaging |
| Element 2: Pattern Recognition | • Involves mapping similarities and differences or patterns among small problems<br>1. Introduce by presenting a slide with pictures within a category (i.e. fruits)<br>2. Ask learners to map and explain similarities/differences or patterns<br>• Primary goal: students understand that finding patterns help them to simplify tasks |

# What is computational thinking?

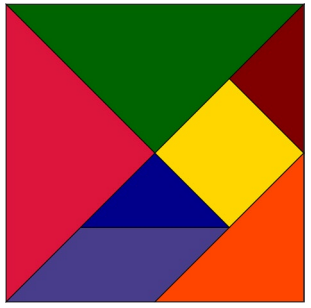
| Element | Description |
| --- | --- |
| Element 3: Abstraction | • Filtering out unimportant details, making the problem easier to understand and solve<br>• Important for students to be introduced to abstraction in relation to patterns<br>  • Helps students to create a general idea of what a problem is and how to solve it by removing irrelevant details and patterns |
| Element 4: Algorithm Design | • Determining appropriate steps to take and organizing them into a series of instructions<br>• Includes knowledge from the previous three steps<br>• Keep it simple! Use simple functions such as brushing your teeth to get students started |

# Computational Thinker Indicators

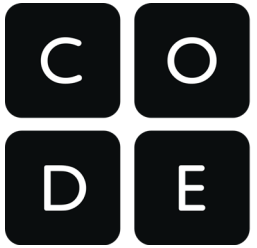
## 5.a.

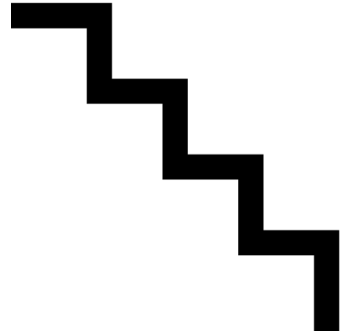
## 5.b.

## 5.c.



## 5.d.



# What does this indicator look like in action?

1. Add up all of the numbers between 1-200 (30 seconds)
2. Let's try breaking the problem into smaller pieces to make it easier to manage: *(decomposition)*
    a. 200 + 1 = ?
    b. 199 + 2 = ?
    c. 198 + 3 = ?
3. What do we notice? (all equal 201) *(pattern recognition)*
4. What is the last pair we will find? (100 + 101)
5. How many of these pairs will we have? (100 total)
6. Now, how can we find the total? (100 x 201)
7. What if we wanted to do this trick with other numbers? *(algorithmic thinking)*

**6-8.5.d.** Students understand how automation works and apply algorithmic thinking to design and automate solutions.

# Additional Resources that Support **Computational Thinking**

- K-12 Computer Science Framework
- CSTA K-12 Computer Science Standards
- Arizona's K-12 Computer Science Standards
- ISTE Standards for Educators: The Computational Thinking Competencies

Mark your calendars!

***Computer Science Education Week***

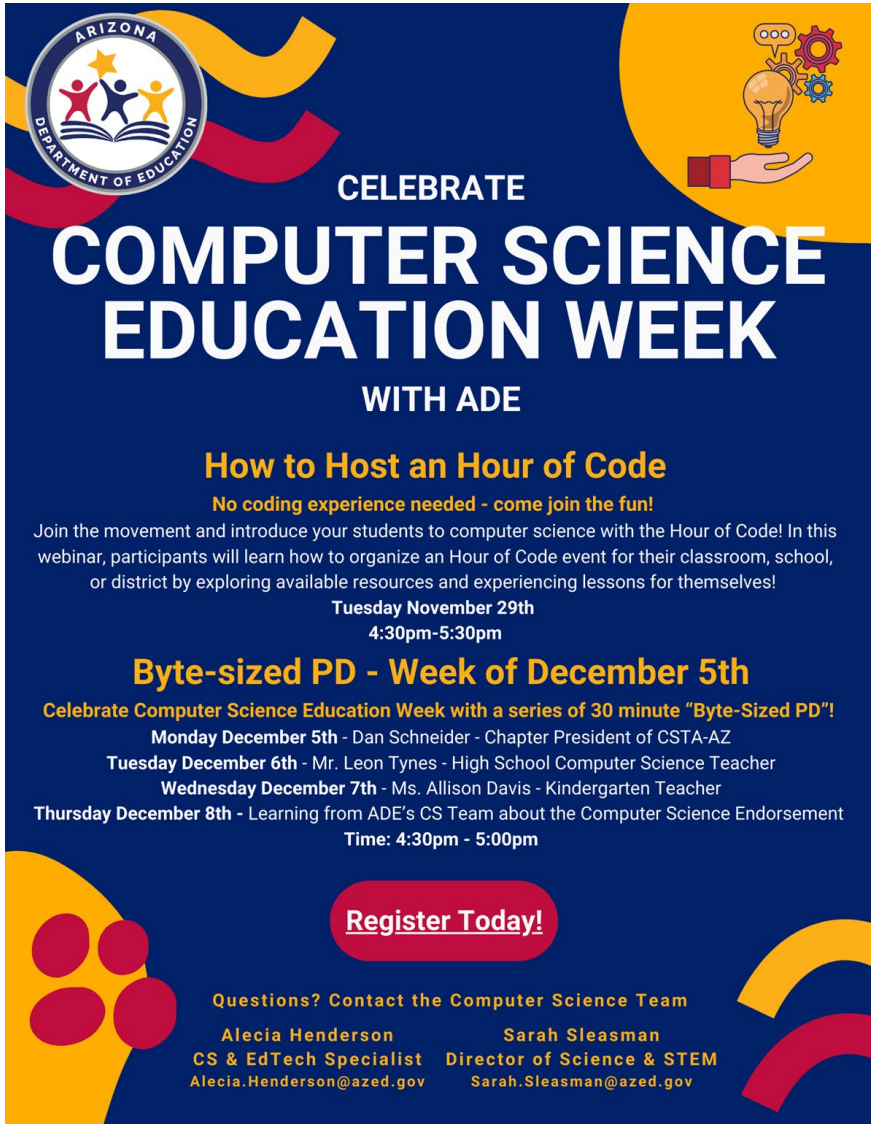
**December 5-December 9**

# What is Computer Science Education Week?

CSEd week is an annual call to action to inspire K-12 students to learn computer science, advocate for equity and celebrate the contributions of students, teachers, and partners to the field.

**#CSEverywhere**

# Celebrate CSEd Week with ADE!



# Educational Technology Standards Implementation

- Educational Technology Professional Development - Sign up here!
- Educational Technology Resources- *Padlet Link*
- Ed Tech Ambassador Program: ADE & AzTEA- *Coming Soon!*
- ISTE Training available through  AzTEA

# Get Involved with Ed Tech & Computer Science Organizations!

**ARIZONA TECHNOLOGY IN EDUCATION ASSOCIATION**

This year marks the 20th anniversary of AzTEA. To celebrate, memberships are being offered at a discounted rate of $20! Click here to join!

**INTERNATIONAL SOCIETY FOR TECHNOLOGY IN EDUCATION**

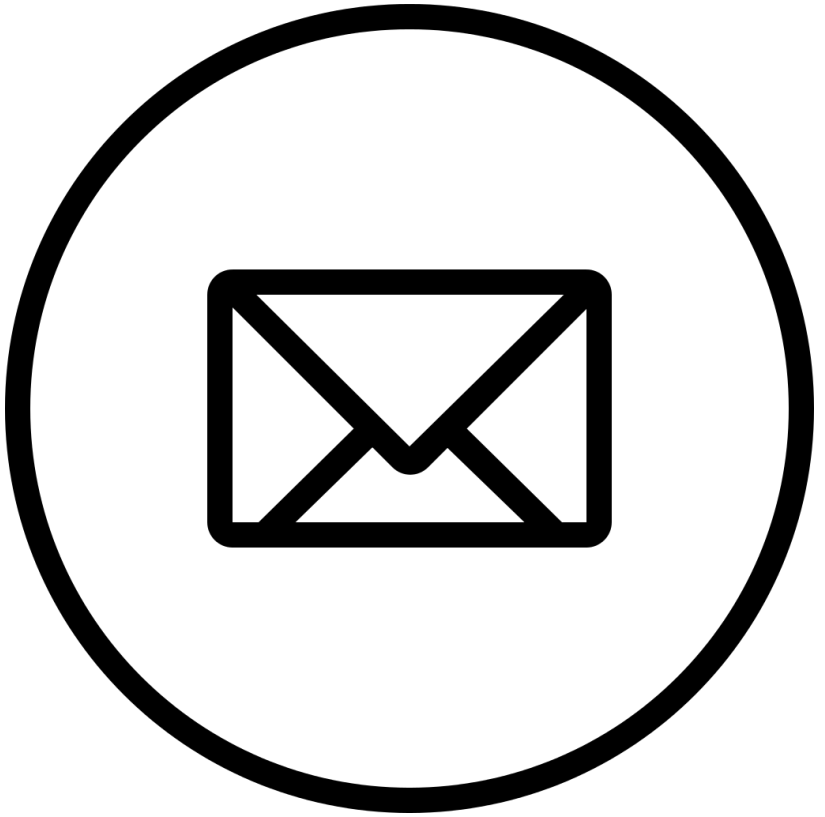
Both basic membership and premium memberships are available. For more information, check out the ISTE website.

**COMPUTER SCIENCE TEACHERS ASSOCIATION - AZ**

Options include a free CSTA basic membership or a paid CSTA+ membership. See the CSTA website for more information.

# Sign up for ADE Listserv!

## Educational Technology



## Computer Science

Please reach out!
I am here to support you!

Alecia Henderson
Computer Science & EdTech Specialist
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# Announcements

# LinkedIn

https://www.linkedin.com/showcase/odtl

Office of Digital Teaching & Learning

# Townhall Meeting Materials

https://www.azed.gov/technology/technology-townhall-meetings

Office of Digital Teaching & Learning

# Next meeting:

## February 13, 2023
## 1:00-3:00pm MST


Kelly Krusee kelly.krusee@azed.gov
Karina Jones karina.jones@azed.gov
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