



Learning that works for Washington

CTE™

Spokane Public Schools Cyber Security

Course: Cyber Security	Total Framework Hours up to: 360
CIP Code: 430116 <input type="checkbox"/> Exploratory <input checked="" type="checkbox"/> Preparatory	Date Last Modified: 7/15/2014
Career Cluster: Information Technology	Cluster Pathway: Network Systems

Overview:

This course provides students with the knowledge to become industry certified as security professionals and will meet specifications for industry certification programs. The following knowledge domains will be addressed:

Employability and 21st Century Skills; ACLs and identity management; physical security; policies, procedures, and awareness; perimeter and network defenses; host, application, and data defenses; audits and assessments

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- Demonstrate leadership and employability as appropriate for experience within the content and team structure
- Complete personal leadership profile, including Career and Technical course history, seminar experiences, safety seminars, community service experiences, and continuous improvement projects

21st Century Skills Leadership Alignment:

- Research career options in the cyber security field
- Participate in security seminars with industry mentors

<p>LEARNING & INNOVATION</p> <p>Creativity and Innovation Think Creatively Work Creatively with Others Implement Innovations</p> <p>Critical Thinking and Problem Solving Reason Effectively Use Systems Thinking</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>XInformation Literacy Use and Manage Information</p> <p>Media Literacy Analyze Media</p> <p>Information, Communications and Technology (ICT Literacy) XApply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>Flexibility and Adaptability Adapt to Change Be Flexible</p> <p>Initiative and Self-Direction Manage Goals and Time Work Independently Produce Results</p>
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Standards and Competencies	
Unit 1: Intro and Employability -- Develop employability skills to secure and keep employment in chosen field	
Competencies	Total Learning Hours for Unit: 20
<ul style="list-style-type: none"> Assess interest areas to determine potential career pathways, including career ladders 	
Aligned Washington State Standards	
Educational Technology	1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.3.1 Identify and define authentic problems and significant questions for investigation and plan strategies to guide inquiry. 1.3.2 Locate and organize information from a variety of sources and media. 1.3.3 Analyze, synthesize and ethically use information to develop a solution, make informed decisions and report results. 2.2.1 Develop skills to use technology effectively. 2.4.1 Formulate and synthesize new knowledge.
Grades 11-12 English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)
Communications	3.1.1 Applies skills to plan and organize effective oral communication and presentation. 3.3.1 Applies skills and strategies for the delivery of effective oral communication and presentations.

COMPONENTS AND ASSESSMENTS
<p>Performance Assessments:</p> <ul style="list-style-type: none"> Access Control and Identity Management: Create, Modify and delete user profiles, Manage Linux Users and Groups, Manage Windows Local Users and Groups, Harden authentication, Manage Certificates Policies, Procedures, and Awareness, Promote Information Security Awareness, Evaluate Information Risk, Maintain Hardware and Software Inventory. Physical Security: Harden Data Center Physical Access, Harden mobile devices (Laptop). Perimeter Defenses: Harden the Network Perimeter (using a Cisco Network Security Appliance), Secure Wireless Devices and Clients Network Defenses: Harden Network Devices (Using a Cisco Small Business Switch), Implement Intrusion Detection/Prevention (Using a Cisco Network Security Appliance). Host Defenses: Harden Computer Systems Against Attack, Implement Patch Management/System Updates, Perform System Backups and Recovery. Application Defenses: Implement Application Defenses, Implement Patch Management/Software Updates. Data Defenses: Protect and maintain the integrity of data files, Protect Data Transmissions across open, public networks. Audits and Assessments: Implement Logging and Auditing, Review Security logs and violation reports, implement remediation, Review audit reports, implement remediation, Review vulnerability reports, and implement remediation.

Leadership Alignment:

- Creative and analytical problem solving to efficiently achieve secure solutions: work creatively with others, implement innovations
- Non-technical cyber principles (e.g. – social engineering, phishing, vishing, spear-phishing, etc.)
- Model leadership through industry standards practices in netiquette, cyber safety, Cyber hygiene.
- Presenting and advising groups of peers or younger on being safe in the Cyber World.

<p>LEARNING & INNOVATION</p> <p>X Creativity and Innovation Work Creatively with Others Implement Innovations</p> <p>Critical Thinking and Problem Solving Reason Effectively Make Judgments and Decisions</p> <p>X Communication and Collaboration Collaborate with Others</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy Access and /evaluate Information</p> <p>X Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>Flexibility and Adaptability Be Flexible</p> <p>Initiative and Self-Direction Manage Goals and Time Be Self-Directed Learners</p> <p>Social and Cross-Cultural Interact Effectively with Others</p>
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Standards and Competencies

Unit 2: ACL, Identity Management, and Cryptography

Competencies	Total Learning Hours for Unit: 80
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- Access control modules
- Authentication
- Authorization
- Access control best practices
- Windows domain users and groups
- Linux users and groups
- Linux user security
- Group policy
- Hardening authentication
- Remote access
- Network authentication
- Identity management
- Cryptography
- Hashing
- Symmetric and asymmetric encryption
- Public key structure (PKI)
- Cryptography implementations

Aligned Washington State Standards

Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.2.1 Communicate and collaborate to learn with others. 1.3.2 Locate and organize information from a variety of sources and media.
Grades 11-12 English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

<p>Performance Assessments:</p> <ul style="list-style-type: none"> • Explain risk related concepts • Carry out appropriate risk mitigation strategies. • Execute appropriate incident response procedures • Explain the importance of security related awareness and training. • Compare and contrast aspects of business continuity. • Explain the impact of proper use of environmental controls. • Execute disaster recovery plans and procedures • Exemplify the concepts of confidentiality, integrity and availability (CIA)

<p>Leadership Alignment:</p> <ul style="list-style-type: none"> • Develop intervention protocols to address security challenges-- maintain change logs and journal security solutions

<p>LEARNING & INNOVATION</p> <p>X Critical Thinking and Problem Solving Reason Effectively Use Systems Thinking Make Judgments and Decisions Solve Problems</p> <p>Communication and Collaboration Collaborate with Others</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy Use and Manage Information</p> <p>Media Literacy Analyze Media</p> <p>Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>X Initiative and Self-Direction Manage Goals and Time Be Self-Directed Learners</p> <p>Social and Cross-Cultural Work Effectively in Diverse Teams</p> <p>X Productivity and Accountability Produce Results</p> <p>Leadership and Responsibility Be Responsible to Others</p>
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Standards and Competencies

Unit 3: Problem Solving, Policies, Procedures, and Awareness (establish, test, document, response)

Competencies

Total Learning Hours for Unit: 80

- Security policies
- Business continuity
- Risk management
- Incident response
- Social engineering
- Certification
- System and life cycle development
- Employee management

Aligned Washington State Standards

Art	2.2 Apply a performance and/or process to visual arts. 3.2 Use visual arts to communicate for a specific purpose
Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.3.1 Identify and define authentic problems and significant questions for investigation and plan strategies to guide inquiry. 1.3.3 Analyze, synthesize and ethically use information to develop a solution, make informed decisions and report results. 2.3.2 Select and use online applications.
Grades 11-12 English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge Standard 9)
Social Studies	Civics 1.4 Understand civic involvement

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- Perform Security measures on live equipment in Lab environment.

<p>Leadership Alignment:</p> <ul style="list-style-type: none"> • Direct security intervention teams to address a variety of simulated challenges • Participate in practice sessions as a productive and reflective
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<p>LEARNING & INNOVATION</p> <p>Critical Thinking and Problem Solving Make Judgments and Decisions Solve Problems</p> <p>X Communication and Collaboration Communicate Clearly Collaborate with Others</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy Access and /evaluate Information</p> <p>Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>Initiative and Self-Direction Social and Cross-Cultural Interact Effectively with Others Work Effectively in Diverse Teams</p> <p>X Productivity and Accountability Produce Results</p> <p>X Leadership and Responsibility Guide and Lead Others Be Responsible to Others</p>
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Standards and Competencies

Unit 4: Threats and Response

Competencies	Total Learning Hours for Unit: 30
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- Physical security
- Perimeter defenses
- Network defenses
- Host defenses
- Application defenses
- Data defenses

Aligned Washington State Standards

<p>Grades 11-12 English Language Arts</p>	<p>SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) L--Vocabulary Acquisition and Use (Standard 4, 6) RST--Craft and Structure (Standard 4) RST--Integration of Knowledge and Ideas (Standard 7, 9) WHST--Production and Distribution of Writing (Standard 4, 6) WHST--Research to Build and Present Knowledge (Standard 8)</p>
<p>Social Studies</p>	<p>Social Studies 5.1 Uses critical reasoning skills to analyze and evaluate positions. Social Studies 5.2 Uses inquiry based research Social Studies 5.4 Creates a product that uses social studies content to support a thesis and presents the product in an appropriate manner to a meaningful audience.</p>

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- Develop and demonstrate vulnerability audit application on a stand-alone network

Leadership Alignment:

- Students will work in teams to prepare and present vulnerability awareness campaigns for individuals and entities
- Work with IT directors for public facilities (libraries, community centers, etc.) to develop vulnerability awareness information for staff
- Develop vulnerability awareness documentation (checklists, etc.) for public facility IT departments

LEARNING & INNOVATION

Critical Thinking and Problem Solving

Reason Effectively
Make Judgments and Decisions
Solve Problems

X Communication and Collaboration

Collaborate with Others

INFORMATION, MEDIA & TECHNOLOGY SKILLS

Information Literacy

Use and Manage Information

Information, Communications and Technology (ICT Literacy)

Apply Technology Effectively

LIFE & CAREER SKILLS

X Productivity and Accountability

Manage Projects

X Leadership and Responsibility

Guide and Lead Others

Standards and Competencies

Unit 5: Assessment and Audits

Competencies

Total Learning Hours for Unit: 30

- Vulnerability assessment
- Penetration testing
- Protocol analyzers
- Logs and audits

Aligned Washington State Standards

Educational Technology

1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools.
1.2.1 Communicate and collaborate to learn with others.
1.3.2 Locate and organize information from a variety of sources and media.
2.2.1 Develop skills to use technology effectively.
2.3.2 Select and use online applications.

**Grades 11-12
English Language Arts**

SL--Comprehension and Collaboration (Standard 1, 2)
SL--Presentation of Knowledge and Ideas (Standard 4, 5)
RST--Integration of Knowledge and Ideas (Standard 7)
WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- **Employ strategies for responding to an incident during and after the incident.**

Leadership Alignment:

- Create a portfolio that will include strategies to deal with incidents and present this to the CyberPatriot Teams as guideline and training tool.
- Define and apply protocols for incident response.
- Develop and follow protocols to maintain secure network systems, connected devices, and access to network systems and connected devices.

LEARNING & INNOVATION

X Critical Thinking and Problem Solving

Reason Effectively
Use Systems Thinking
Make Judgments and Decisions
Solve Problems

Communication and Collaboration

Communicate Clearly
Collaborate with Others

INFORMATION, MEDIA & TECHNOLOGY SKILLS

Information Literacy

Access and /evaluate Information
Use and Manage Information

LIFE & CAREER SKILLS

X Productivity and Accountability

Manage Projects
Produce Results

X and Responsibility

Guide and Lead Others
Be Responsible to Others

Standards and Competencies

<p>Grades 11-12 Educational Technology</p>	<p>1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.</p>
<p>English Language Arts</p>	<p>SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)</p>

Unit 6: Incident Response

Develop, implement, and document appropriate incidence response procedures

Competencies

Total Learning Hours for Unit: 30

- Section 6.1 Network Review
- Section 6.2 Perimeter Attacks
- Section 6.3 Security Applications

- Section 6.4 Demilitarized zones (DAZ)
- Section 6.5 Firewalls
- Section 6.6 Network Address Translation (NAT)
- Sections 6.7 Virtual Networks (VPN)
- Section 6.8 Web Threat Protection
- Section 6.9 Network Access Control (NAC)
- Section 6.10 Wireless Attacks
- Section 6.11 Wireless Defenses

Aligned Washington State Standards

Grades 11-12 Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.
English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- **Distinguish and differentiate network design elements and compounds.**
- **Implement and use common protocols**
- **Identify commonly used default network ports**

Leadership Alignment:

- SkillsUSA (Student CTSO) Networking competition preparation applying learned concepts in competition.

<p>LEARNING & INNOVATION</p> <p>X Creativity and Innovation Think Creatively Implement Innovations</p> <p>Critical Thinking and Problem Solving Reason Effectively Use Systems Thinking Make Judgments and Decisions Solve Problems</p> <p>Communication and Collaboration Communicate Clearly</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>X Information Literacy Access and /evaluate Information Use and Manage Information</p> <p>X Media Literacy Analyze Media</p> <p>Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>X Flexibility and Adaptability Be Flexible</p> <p>X Social and Cross-Cultural Interact Effectively with Others Work Effectively in Diverse Teams</p> <p>Productivity and Accountability Manage Projects</p>
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Standards and Competencies

Unit 7: Certification Exams (Orientation for Security+)

Prepare for and pass nationally recognized certification exams (Security+)

Competencies

Total Learning Hours for Unit: 15

- Preparing for certification exam
- Exam objectives
- Exam-taking tips and hints
- Exam domains

Aligned Washington State Standards

Grades 11-12 Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.
English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- **Prepare for and pass nationally recognized certification exams (Security+)**

Leadership Alignment:

- Establish and implement a plan that indicates personal responsibility toward certification assessment preparation

Standards and Competencies

Unit 8: Certification Exams (System Security)

Prepare for and pass nationally recognized certification exams (Security+)

Competencies

Total Learning Hours for Unit: 20

- Section 8.1: Malware
- Section 8.2: Password Attacks
- Section 8.3: Windows System Hardening
- Section 8.4: Hardening Enforcement
- Section 8.5: File Server Security
- Section 8.6: Linux Host Security

Aligned Washington State Standards	
Grades 11-12 Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.
English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- Prepare for and pass nationally recognized certification exams (Security+)

Leadership Alignment:

- Establish and implement a plan that indicates personal responsibility toward certification assessment preparation

LEARNING & INNOVATION	INFORMATION, MEDIA & TECHNOLOGY SKILLS	X LIFE & CAREER SKILLS
Creativity and Innovation Work Creatively with Others Implement Innovations X Critical Thinking and Problem Solving Use Systems Thinking Solve Problems Communication and Collaboration Collaborate with Others	Information Literacy Use and Manage Information Media Literacy Analyze Media Create Media Products Information, Communications and Technology (ICT Literacy) Apply Technology Effectively	X Flexibility and Adaptability Adapt to Change Initiative and Self-Direction Manage Goals and Time Social and Cross-Cultural Work Effectively in Diverse Teams X Leadership and Responsibility Guide and Lead Others

Standards and Competencies

Unit 9: Certification Exams (Internetworking Applications)

Prepare for and pass nationally recognized certification exams (Security+)

Competencies	Total Learning Hours for Unit: 20
Section 9.1: Web Application Attacks Section 9.2: Internet Browsers Section 9.3: E-mail Section 9.4: Network Applications Section 9.5: Virtualization Section 9.6: Application Development	

Aligned Washington State Standards	
Grades 11-12 Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.
English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

COMPONENTS AND ASSESSMENTS

Performance Assessments:

- Prepare for and pass nationally recognized certification exams (Security+)

Leadership Alignment:

- Establish and implement a plan that indicates personal responsibility toward certification assessment preparation

LEARNING & INNOVATION	INFORMATION, MEDIA & TECHNOLOGY SKILLS	LIFE & CAREER SKILLS
Creativity and Innovation Work Creatively with Others Implement Innovations X Critical Thinking and Problem Solving Use Systems Thinking Solve Problems Communication and Collaboration Communicate Clearly Collaborate with Others	X Information Literacy Use and Manage Information X Media Literacy Analyze Media Information, Communications and Technology (ICT Literacy) Apply Technology Effectively	Flexibility and Adaptability Adapt to Change X Initiative and Self-Direction Manage Goals and Time Work Independently Be Self-Directed Learners

Standards and Competencies

Unit 10: Certification Exams (Secure Data Storage and Restoration)

Prepare for and pass nationally recognized certification exams (Security+)

Competencies	Total Learning Hours for Unit: 20
Section 10.1: Redundancy Section 10.2: Backup and Restore Section 10.3: File Encryption Section 10.4: Secure Protocols	

Section 10.5: Cloud Computing

Aligned Washington State Standards

Grades 11-12 Educational Technology	1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.
English Language Arts	SL--Comprehension and Collaboration (Standard 1, 2) SL--Presentation of Knowledge and Ideas (Standard 4, 5) RST--Integration of Knowledge and Ideas (Standard 7) WHST--Research to Build and Present Knowledge (Standard 9)

Performance Assessments:

- Access Control and Identity Management: Create, Modify and delete user profiles, Manage Linux Users and Groups, Manage Windows Local Users and Groups, Harden authentication, Manage Certificates
- Policies, Procedures, and Awareness: Promote Information Security Awareness, Evaluate Information Risk, Maintain Hardware and Software Inventory.
- Physical Security: Harden Data Center Physical Access, Harden mobile devices (Laptop).
- Perimeter Defenses: Harden the Network Perimeter (using a Cisco Network Security Appliance), Secure Wireless Devices and Clients.
- Network Defenses: Harden Network Devices (Using a Cisco Small Business Switch), Implement Intrusion Detection/Prevention (Using a Cisco Network Security Appliance).
- Host Defenses: Harden Computer Systems Against Attack, Implement Patch Management/System Updates, Perform System Backups and Recovery.
- Application Defenses: Implement Application Defenses, Implement Patch Management/Software Updates.
- Data Defenses: Protect and maintain the integrity of data files, Protect Data Transmissions across open, public networks.
- Audits and Assessments: Implement Logging and Auditing, Review Security logs and violation reports, implement remediation, Review audit reports, implement remediation, Review vulnerability reports, and implement remediation.

Leadership Alignment:

- Leadership and teamwork.
- Creative and analytical problem solving.
- Non-technical cyber principles (e.g. – social engineering, phishing, vishing, spear-phishing, etc.).
- Netiquette, cyber safety, Cyber hygiene.
- Presenting and advising groups of peers or younger on being safe in the Cyber World.

<p>LEARNING & INNOVATION</p> <p>Creativity and Innovation Work Creatively with Others</p> <p>X Critical Thinking and Problem Solving Use Systems Thinking Make Judgments and Decisions Solve Problems</p> <p>Communication and Collaboration Communicate Clearly</p>	<p>X INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy Access and /evaluate Information</p> <p>Media Literacy Analyze Media</p> <p>Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>X LIFE & CAREER SKILLS</p> <p>Flexibility and Adaptability Adapt to Change</p> <p>Initiative and Self-Direction Manage Goals and Time</p> <p>Social and Cross-Cultural Interact Effectively with Others</p> <p>Productivity and Accountability Manage Projects</p> <p>Leadership and Responsibility Guide and Lead Others Be Responsible to Others</p>
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Standards and Competencies

<p>Unit 11: Certification Exams (Vulnerability Assessment, Audits, and Logs)</p> <p>Prepare for and pass nationally recognized certification exams (Security+)</p>	<p>Total Learning Hours for Unit: 15</p>
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<p>Section 11.1: Vulnerability Assessment Section 11.2: Penetration Testing Section 11.3: Protocol Analysis Section 11.4: Logs and Audits</p>

Aligned Washington State Standards

<p>Grades 11-12 Educational Technology</p>	<p>1.1.1 Generate ideas and create original works for personal and group expression using a variety of digital tools. 1.1.2 Use models and simulations to explore systems, identify trends and forecast possibilities. 1.2.1 Communicate and collaborate to learn with others. 1.3.4 Use multiple processes and diverse perspectives to explore alternative solutions. 2.3.1 Select and use common applications.</p>
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<p>Leadership Alignment:</p> <ul style="list-style-type: none"> • Leadership and team work. • Creative and analytical problem solving. • Non-technical cyber principles (e.g. – social engineering, phishing, vishing, spear-phishing, etc.). • Netiquette, cyber safety, Cyber hygiene. • Presenting and advising groups of peers or younger on being safe in the Cyber World.

<p>X LEARNING & INNOVATION</p> <p>Creativity and Innovation Work Creatively with Others</p> <p>X Critical Thinking and Problem Solving Use Systems Thinking Make Judgments and Decisions Solve Problems</p> <p>Communication and Collaboration Communicate Clearly</p>	<p>X INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy Access and /evaluate Information</p> <p>Media Literacy Analyze Media</p> <p>Information, Communications and Technology (ICT Literacy) Apply Technology Effectively</p>	<p>X LIFE & CAREER SKILLS</p> <p>Flexibility and Adaptability Adapt to Change</p> <p>Initiative and Self-Direction Manage Goals and Time</p> <p>Social and Cross-Cultural Interact Effectively with Others</p> <p>Productivity and Accountability Manage Projects</p> <p>X Leadership and Responsibility Guide and Lead Others Be Responsible to Others</p>
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21st Century Skills

<p>LEARNING & INNOVATION</p> <p>Creativity and Innovation <input checked="" type="checkbox"/> Think Creatively <input checked="" type="checkbox"/> Work Creatively with Others <input checked="" type="checkbox"/> Implement Innovations</p> <p>Critical Thinking and Problem Solving <input checked="" type="checkbox"/> Reason Effectively <input checked="" type="checkbox"/> Use Systems Thinking <input checked="" type="checkbox"/> Make Judgments and Decisions <input checked="" type="checkbox"/> Solve Problems</p> <p>Communication and Collaboration <input checked="" type="checkbox"/> Communicate Clearly <input checked="" type="checkbox"/> Collaborate with Others</p>	<p>INFORMATION, MEDIA & TECHNOLOGY SKILLS</p> <p>Information Literacy <input checked="" type="checkbox"/> Access and /evaluate Information <input checked="" type="checkbox"/> Use and Manage Information</p> <p>Media Literacy <input checked="" type="checkbox"/> Analyze Media <input checked="" type="checkbox"/> Create Media Products</p> <p>Information, Communications and Technology (ICT Literacy) <input checked="" type="checkbox"/> Apply Technology Effectively</p>	<p>LIFE & CAREER SKILLS</p> <p>Flexibility and Adaptability <input checked="" type="checkbox"/> Adapt to Change <input checked="" type="checkbox"/> Be Flexible</p> <p>Initiative and Self-Direction <input checked="" type="checkbox"/> Manage Goals and Time <input checked="" type="checkbox"/> Work Independently <input checked="" type="checkbox"/> Be Self-Directed Learners</p> <p>Social and Cross-Cultural <input checked="" type="checkbox"/> Interact Effectively with Others <input checked="" type="checkbox"/> Work Effectively in Diverse Teams</p> <p>Productivity and Accountability <input checked="" type="checkbox"/> Manage Projects <input checked="" type="checkbox"/> Produce Results</p> <p>Leadership and Responsibility <input checked="" type="checkbox"/> Guide and Lead Others <input checked="" type="checkbox"/> Be Responsible to Others</p>
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