

Auburn School District #408 Framework: Computer Systems Engineering 4

Course: Computer Installation and Repair Technology/Technician

Total Framework Hours: 90 Hours

CIP Code: 470104

Type: Preparatory

Career Cluster: Information Technology

Date Last Modified: Friday, April 15, 2016

Resources and Standard used in Framework Development:

Standards used for this framework are from the OSPI Model Framework for 470104 Computer Installation and Repair Technology/Technician

Unit 7 FIREWALLS

Hours: 15

Performance Assessment(s):

Testout LabSim Net Pro Unit 7 Exams
Testout LabSim Net Pro Unit 7 Lab Simulations
Testout LabSim Net Pro Unit 7 Final Assessment

Leadership Alignment:

SkillsUSA Internetworking
WORK 1.0: Explain common networking concepts and terminology
SkillsUSA Committee Identified Academic Skills:
Language Arts Standards - Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information)
Implement Innovations
1.C.1 Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur
Works Independently
8.B.1 Monitor, define, prioritize and complete tasks without direct oversight

Standards and Competencies

Standard: Networking
Standard: Network Security
Standard WR 2: Personal Success

Aligned to Washington State Standards

Arts

Communication - Speaking and Listening

Health and Fitness

Language

Mathematics

Reading

CC: Reading Informational Text

Science

Social Studies

Writing

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (9-10)

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (11-12)

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- Implement Innovations

Creative Thinking and Problem Solving

- Reason Effectively
- Use Systems Thinking
- Make Judgements and Decisions
- Solve Problems

Communication and Collaboration

- Communicate Clearly
- Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
- Use and Manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications, and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
- Work Independently
- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
- Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
- Produce Results

Leadership and Responsibility

- Guide and Lead Others
- Be Responsible to Others

Unit 8 NETWORK CUSTOMIZATION**Hours: 15****Performance Assessment(s):**

Testout LabSim Net Pro Unit 8 Exams
Testout LabSim Net Pro Unit 8 Lab Simulations
Testout LabSim Net Pro Unit 8 Final Assessment

Leadership Alignment:

SkillsUSA Internetworking
WORK 1.0: Explain common networking concepts and terminology
WORK 2.0: Install and troubleshoot basic hardware and software required to communicate in a simple network and test for connectivity
WORK 3.0: Compare and contrast various types of media used for networking
SkillsUSA Committee Identified Academic Skills:
Language Arts Skills:
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information)
Implement Innovations
1.C.1 Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur
Apply Technology Effectively
6.A.1 Use technology as a tool to research, organize, evaluate and communicate information

Standards and Competencies

Standard: Networking
Standard: Network Devices
Standard: Network tools
Standard WR 2: Personal Success

Aligned to Washington State Standards**Arts****Communication - Speaking and Listening****Health and Fitness****Language****Mathematics****Reading**

CC: Reading Informational Text

CC: Reading for Literacy in Science and Technical Subjects

Science

Social Studies

Writing

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (9-10)

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (11-12)

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- Implement Innovations

Creative Thinking and Problem Solving

- Reason Effectively
- Use Systems Thinking
- Make Judgements and Decisions
- Solve Problems

Communication and Collaboration

- Communicate Clearly
- Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
- Use and Manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications, and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
- Work Independently
- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
- Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
- Produce Results

Leadership and Responsibility

- Guide and Lead Others
- Be Responsible to Others

Unit 9 WIRELESS NETWORKING**Hours: 20****Performance Assessment(s):**

Testout LabSim Net Pro Unit 9 Exams
Testout LabSim Net Pro Unit 9 Lab Simulations
Testout LabSim Net Pro Unit 9 Final Assessment

Leadership Alignment:

SkillsUSA Internetworking
WORK 1.0: Explain common networking concepts and terminology
WORK 2.0: Install and troubleshoot basic hardware and software required to communicate in a simple network and test for connectivity
WORK 3.0: Compare and contrast various types of media used for networking
WORK 29.0: Describe how virtual LANs help to control broadcast domains and how this benefits the LAN network
SkillsUSA Committee Identified Academic Skills:
Language Arts Skills:
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information)
2.D.2 Identify and ask significant questions that clarify various points of view and lead to better solutions
4.A.2 Evaluate information critically and competently

Standards and Competencies

Standard: Networking
Standard: Network Security
Standard: Network Media and Topologies
Standard: Network Devices
Standard: Network tools
Standard WR 2: Personal Success

Aligned to Washington State Standards**Arts****Communication - Speaking and Listening****Health and Fitness****Language****Mathematics****Reading**

CC: Reading Informational Text

CC: Reading for Literacy in Science and Technical Subjects

Science

Social Studies

Writing

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (9-10)

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (11-12)

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- Implement Innovations

Creative Thinking and Problem Solving

- Reason Effectively
- Use Systems Thinking
- Make Judgements and Decisions
- Solve Problems

Communication and Collaboration

- Communicate Clearly
- Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
- Use and Manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications, and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
- Work Independently
- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
- Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
- Produce Results

Leadership and Responsibility

- Guide and Lead Others
- Be Responsible to Others

Unit 10 NETWORK SECURITY**Hours: 10****Performance Assessment(s):**

Testout LabSim Net Pro Unit10 Exams
 Testout LabSim Net Pro Unit 10 Lab Simulations
 Testout LabSim Net Pro Unit 10 Final Assessment

Leadership Alignment:

SkillsUSA Internetworking
 WORK 1.0: Explain common networking concepts and terminology
 WORK 3.0: Compare and contrast various types of media used for networking
 SkillsUSA Committee Identified Academic Skills:
 Language Arts Skills:
 - Students use spoken, written and visual language to accomplish their own purposes
 (e.g., for learning, enjoyment, persuasion and the exchange of information)
 Access and Evaluate Information
 4.A.1 Access information efficiently (time) and effectively (sources)
 Apply Technology Effectively
 6.A.1 Use technology as a tool to research, organize, evaluate and communicate information

Standards and Competencies

Standard: Networking
 Standard: Network Security
 Standard WR 2: Personal Success
 Standard WR 4: Problem Solving

Aligned to Washington State Standards**Arts****Communication - Speaking and Listening****Health and Fitness****Language****Mathematics****Reading**

CC: Reading Informational Text

CC: Reading for Literacy in Science and Technical Subjects

Science

Social Studies

Writing

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (9-10)

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (11-12)

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- Implement Innovations

Creative Thinking and Problem Solving

- Reason Effectively
- Use Systems Thinking
- Make Judgements and Decisions
- Solve Problems

Communication and Collaboration

- Communicate Clearly
- Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
- Use and Manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications, and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
- Work Independently
- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
- Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
- Produce Results

Leadership and Responsibility

- Guide and Lead Others
- Be Responsible to Others

Unit 11 NETWORK MANAGEMENT**Hours: 10****Performance Assessment(s):**

Testout LabSim Net Pro Unit 11 Exams
Testout LabSim Net Pro Unit 11 Lab Simulations
Testout LabSim Net Pro Unit 11 Final Assessment

Leadership Alignment:

SkillsUSA Internetworking
WORK 1.0: Explain common networking concepts and terminology
SkillsUSA Committee Identified Academic Skills:
Language Arts Skills:
- Students use spoken, written and visual language to accomplish their own purposes
(e.g., for learning, enjoyment, persuasion and the exchange of information)
4.B.2 Manage the flow of information from a wide variety of sources
Works Independently
8.B.1 Monitor, define, prioritize and complete tasks without direct oversight

Standards and Competencies

Standard: Networking
Standard: Network Management
Standard WR 2: Personal Success

Aligned to Washington State Standards**Arts****Communication - Speaking and Listening****Health and Fitness****Language****Mathematics****Reading**

CC: Reading Informational Text

CC: Reading for Literacy in Science and Technical Subjects

Science**Social Studies****Writing**

CC: Writing for Literacy in History/Social Studies, Science, and Technical Subjects (9-10)

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- Implement Innovations

Creative Thinking and Problem Solving

- Reason Effectively
- Use Systems Thinking
- Make Judgements and Decisions
- Solve Problems

Communication and Collaboration

- Communicate Clearly
- Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
- Use and Manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications, and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
- Work Independently
- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
- Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
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Unit 12 TROUBLESHOOTING & CAPSTONE EXERCISES

Hours: 20

Performance Assessment(s):

Testout LabSim Net Pro Unit 12 Exams
Testout LabSim Net Pro Unit 12 Lab Simulations
Testout LabSim Net Pro Unit 12 Final Assessment
NetPro Certification Exam

Leadership Alignment:

SkillsUSA Internetworking
WORK 1.0: Explain common networking concepts and terminology
WORK 2.0: Install and troubleshoot basic hardware and software required to communicate in a simple network and test for connectivity
WORK 3.0: Compare and contrast various types of media used for networking
WORK 5.0: Optimize network design in regard to segmentation, collision domains and broadcast domains
WORK 8.0: Define the Layers of the OSI model
WORK 35.0: Network Systems Administration
SkillsUSA Committee Identified Academic Skills:
Language Arts Skills:
- Students use spoken, written and visual language to accomplish their own purposes
(e.g., for learning, enjoyment, persuasion and the exchange of information)

1.A.3 Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts
8.A.3 Utilize time and manage workload efficiently

Standards and Competencies

Standard: Networking
Standard: Network Security
Standard: Network Media and Topologies
Standard: Network Devices
Standard: Network tools
Standard WR 2: Personal Success
Standard WR 4: Problem Solving

Aligned to Washington State Standards

Arts

Communication - Speaking and Listening

Health and Fitness

Language

Mathematics

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