Networking Support Evaluation Tool

2020 Curricular Materials Review

Idaho Engineering and Technology Education (ETE) Networking Support Program Standards[[1]](#footnote-1)

**Publisher information**

* Publisher Name:
* Title:
* Grade Level:
* ISBN #:
* Author:
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# Instructions:

Complete the Publisher Standards Alignment Report below. Please provide written justification as to how the material meets the standard along with location references. If a justification requires additional space, please submit response on an additional document.

# Publisher STANDARDS ALIGNMENT Report:

## Standard NTWK.1.0: End Point Technologies

### Performance Standard NTWK.1.1 PC hardware Configuration and Installation

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE NTWK.1.1.1 Identify and understand motherboards and related components. |  |
| CTE NTWK.1.1.2 Identify and understand RAM types and features. |  |
| CTE NTWK.1.1.3 Identify and understand expansion card uses and differences. |  |
| CTE NTWK.1.1.4 Understand differences and use of storage devices and media types. |  |
| CTE NTWK.1.1.5 Identify and understand CPU types and features. |  |
| CTE NTWK.1.1.6 Identify power supply requirements and select appropriate unit for a system. |  |
| CTE NTWK.1.1.7 Demonstrate custom configurations per customer needs. |  |
| CTE NTWK.1.1.8 Identify and understand the use of connector types and associated cables. |  |
| CTE NTWK.1.1.9 Demonstrate the installation and configuration of peripheral devices. |  |
| CTE NTWK.1.1.10 Identify when a field replacement unit is needed. |  |

### Performance Standard NTWK.1.2 Fundamental Networking Technologies

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.1.2.1 Identify network cables and connectors and their characteristics. |  |
| CTE NTWK.1.2.2 Explain TCP/IP suite characteristics and properties. |  |
| CTE NTWK.1.2.3 Identify and understand the use of common TCP / UDP ports, protocols, and their characteristics. |  |
| CTE NTWK.1.2.4 Understand wireless networking standards and encryption types. |  |
| CTE NTWK.1.2.5 Demonstrate installation, configuration, and deployment of a home office network. |  |
| CTE NTWK.1.2.6 Understand and explain different Internet connection types and features. |  |
| CTE NTWK.1.2.7 Understand different network devices, their functions, and features. |  |
| CTE NTWK.1.2.8 Demonstrate the appropriate use of field networking tools. |  |
| CTE NTWK.1.2.9 Identify appropriate hardware and software tools to troubleshoot connectivity issues. |  |

### Performance Standard NTWK.1.3 Laptops, Mobile Devices, and Related Hardware

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.1.3.1 Demonstrate the installation and configuration of related peripherals. |  |
| CTE NTWK.1.3.2 Understand and recognize different features of laptops and mobile devices. |  |
| CTE NTWK.1.3.3 Demonstrate custom configurations per customer needs. |  |

### Performance Standard NTWK.1.4 Printer and Imaging Hardware

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
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| CTE NTWK.1.4.1 Identify and explain the different types and use of printers. |  |
| CTE NTWK.1.4.2 Understand and explain the different imaging processes. |  |
| CTE NTWK.1.4.3 Identify proper basic printer maintenance. |  |

### Performance Standard NTWK.1.5 Operating Systems

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.1.5.1 Understand the features and requirements of various operating systems. |  |
| CTE NTWK.1.5.2 Demonstrate how to install, upgrade, and configure an operating system. |  |
| CTE NTWK.1.5.3 Understand and demonstrate the use of command line tools. |  |
| CTE NTWK.1.5.4 Understand and demonstrate operating system tools and utilities. |  |
| CTE NTWK.1.5.5 Understand networking and configuration of operating systems. |  |
| CTE NTWK.1.5.6 Understand and explain the differences in basic OS security settings. |  |
| CTE NTWK.1.5.7 Understand the basics of virtualization. |  |

### Performance Standard NTWK.1.6 Operating Systems

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.1.6.1 Understand the application and usage of common prevention methods. |  |
| CTE NTWK.1.6.2 Understand the differences in common security threats. |  |
| CTE NTWK.1.6.3 Demonstrate the implementation of best practices to secure a workstation. |  |
| CTE NTWK.1.6.4 Understand appropriate data destruction and disposal methods. |  |
| CTE NTWK.1.6.5 Understand and demonstrate basic wired and wireless network security. |  |

## Standard NTWK.2.0: Networking Technologies

### Performance Standard NTWK.2.1 Basic Networking Concepts

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.1.1 Compare the layers of the OSI and TCP/IP models. |  |
| CTE NTWK.2.1.2 Classify how applications, devices, and protocols relate to the OSI model layers. |  |
| CTE NTWK.2.1.3 Explain the purpose and properties of IP addressing. |  |
| CTE NTWK.2.1.4 Explain the purpose and properties of routing and switching. |  |
| CTE NTWK.2.1.5 Identify common TCP and UDP well-known ports. |  |
| CTE NTWK.2.1.6 Explain the function of common networking protocols. |  |
| CTE NTWK.2.1.7 Summarize DNS concepts and its components. |  |
| CTE NTWK.2.1.8 Identify virtual network components. |  |

### Performance Standard NTWK.2.2 Installation, Configuration, and Troubleshooting

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.2.1 Configure network devices using basic CLI and/or GUI as appropriate. |  |
| CTE NTWK.2.2.2 Explain the purpose and properties of DHCP. |  |
| CTE NTWK.2.2.3 Troubleshoot common router and switch problems. |  |
| CTE NTWK.2.2.4 Design and implement a basic network. |  |
| CTE NTWK.2.2.5 Demonstrate appropriate use of hardware tools to troubleshoot connectivity issues. |  |
| CTE NTWK.2.2.6 Demonstrate appropriate use of software tools to troubleshoot connectivity issues. |  |

### Performance Standard NTWK.2.3 Network Media and Topologies Installation and Configuration

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE NTWK.2.3.1 Categorize standard media types and associated properties. |  |
| CTE NTWK.2.3.2 Categorize standard connector types based on network media. |  |
| CTE NTWK.2.3.3 Categorize WAN technology types and properties. |  |
| CTE NTWK.2.3.4 Troubleshoot common physical connectivity problems. |  |
| CTE NTWK.2.3.5 Compare and contrast different network physical and logical topologies. |  |
| CTE NTWK.2.3.6 Identify components of wiring distribution. |  |

### Performance Standard NTWK.2.4 Network and Change Management

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.4.1 Identify and document the purpose and features of network devices. |  |
| CTE NTWK.2.4.2 Demonstrate best practices of network and configuration management. |  |

### Performance Standard NTWK.2.5 Basic Network Security

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.5.1 Explain the methods of network access security. |  |
| CTE NTWK.2.5.2 Explain methods of user authentication. |  |
| CTE NTWK.2.5.3 Explain common threats, vulnerabilities, and mitigation techniques. |  |
| CTE NTWK.2.5.4 Install and configure a basic firewall. |  |
| CTE NTWK.2.5.5 Categorize different types of network security appliances and methods. |  |

### Performance Standard NTWK.2.6 IP Addressing

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.6.1 Understand the importance of subnetting. |  |
| CTE NTWK.2.6.2 Demonstrate and apply prefix notation in subnetting. |  |
| CTE NTWK.2.6.3 Design, calculate, and apply subnet masks and addresses to fulfill given topology. |  |

### Performance Standard NTWK.2.7 Configuration of Network Devices Using CLI and GUI Commands

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.2.7.1 Configure hostname, password and interface configuration. |  |
| CTE NTWK.2.7.2 Configure static and dynamic routing. |  |
| CTE NTWK.2.7.3 Verify network device configurations using investigative commands. |  |

## Standard NTWK.3.0: Customer Service

### Performance Standard NTWK.3.1 Customer Service Communication Skills

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE NTWK.3.1.1 Listen actively and ask relevant questions to understand customer needs. |  |
| CTE NTWK.3.1.2 Communicate effectively with non-technical customers. |  |
| CTE NTWK.3.1.3 Deal professionally with frustrated customers. |  |

# Indicators of quality Rubric:

Standards aligned and Integrated Curriculum:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The curriculum is based on industry-validated technical standards and competencies. |  |
| 1. The curriculum is aligned with relevant content and standards for core subjects, such as reading, math and science, including federal, state and/or local standards, as appropriate. |  |
| 1. The curriculum incorporates employability skill standards that help students succeed in the workplace, such as problem solving, critical thinking, teamwork, communications and workplace etiquette. |  |
| 1. The curriculum allows for student application of integrated knowledge and skills in authentic scenarios. |  |
| 1. Materials used reflect current workplace, industry and/or occupational practices and requirements. |  |

Access and Equity:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Materials are provided in a way that ensures all students have the opportunity to achieve success in the program of study, including by meeting Title IX, Americans with Disabilities Act and other accessibility requirements. |  |
| 1. Materials and assessments are free from bias, inclusive and non-discriminatory, and offered in a way that ensures all students have the opportunity to achieve success in the program of study. |  |
| 1. Contains guidance to support differentiated and culturally responsive (i.e., purposefully represents diverse cultures, linguistic backgrounds, learning styles and interests) instruction in the classroom so that every student’s need are addressed by including:    1. Suggestions for how to promote equitable instruction by making connections to culture, home, neighborhood, and community as appropriate.    2. Appropriate scaffolding, interventions, and supports, including integrated and appropriate reading, writing, listening, and speaking alternatives (e.g., translations, picture support, graphic organizers) that neither sacrifice content nor avoid language development for English language learners, special needs, or below grade level readers.    3. Digital and print resources that provide various levels of readability.    4. Modifications and extensions for all students, including those performing above their grade level, to deepen understanding of the content.    5. Materials in multiple language formats. |  |

Student Focus:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material supports the sequential and cumulative development of foundational skills and progresses in specificity to build students’ depth of knowledge and skills. Those skills are necessary for a student’s independent comprehension of grade-level complex texts and mastery of tasks called for by the standards. |  |
| 1. Content and standards within the program of study are non-duplicative and vertically aligned to prepare students to transition seamlessly to the next level of education. |  |
| 1. The material provides many and varied opportunities for students to work with each standard within the grade level. |  |
| 1. The material cross-refers and integrates other content areas. |  |
| 1. The material has a balance of text types and lengths that encourage close, in-depth reading and rereading, analysis, comparison, and synthesis of texts. |  |
| 1. The material includes sufficient supplementary activities or assignments that are appropriately integrated into the text. |  |
| 1. The material has activities and assignments that develop problem-solving skills and foster synthesis and inquiry at both an individual and group level. |  |
| 1. The material has activities and assignments that reflect varied learning styles of students. |  |
| 1. The material includes appropriate instructional strategies. |  |
| 1. Project-based learning and related instructional approaches, such as problem-based, inquiry-based and challenge-based learning, are fully integrated into the material. |  |

Pedagogical Approach:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Provides guidance for teachers throughout for how learning experiences build on each other to support students in developing a deep understanding of the content. |  |
| 1. Provides scaffolded supports for teachers to facilitate learning of the content so that students are increasingly responsible for making sense of the content. |  |
| 1. The material provides opportunities for supporting English language learners to regularly and actively participate with grade-level text. |  |
| 1. The material gives clear and concise instruction to teachers and students. It is easy to navigate and understand. |  |
| 1. Includes appropriate academic and content-specific vocabulary in the context of the learning experience that is accessible, introduced, reinforced, reviewed, and augmented with visual representations when appropriate. |  |
| 1. Allows teachers to access, revise, and print form digital resources (e.g., readings, labs, assessments, rubrics). |  |
| 1. Uses varied modes (selected, constructed, project-based, extended response, and performance tasks) of instruction-embedded pre-, formative, summative, peer, and, self-assessment measures of learning. |  |
| 1. Includes editable and aligned rubrics, scoring guidelines, and exemplars that provide guidance for assessing student performance and to support teachers in planning instruction and providing ongoing feedback to students. |  |
| 1. Provides multiple opportunities for students to demonstrate and receive feedback on performance of practices connected with their understanding of concepts. |  |

Presentation and Design:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material has an aesthetically appealing appearance. |  |
| 1. Digital and print materials are consistently formatted, visually focused, and uncluttered for efficient use. |  |
| 1. The material has a reasonable and appropriate balance between text and illustration. The material has grade-appropriate font size. |  |
| 1. The illustrations clearly cross-reference the text, are directly relevant to the content (not simply decorative), and promote thinking, discussion, and problem solving. |  |
| 1. Non-text content (performance clips, images, maps, globes, graphs, pictures, charts, databases, and models) are accurate and well integrated into the text. |  |

Technology:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Technology and digital media support, extend, and enhance learning experiences. |  |
| 1. The material has “platform neutral” technology (i.e., cloud based) and availability for networking. |  |
| 1. The material has a user-friendly and interactive interface allowing the user to control (shift among activities). |  |

For Questions Contact

Content & Curriculum

Idaho State Department of Education

650 W State Street, Boise, ID 83702

208 332 6800 | [www.sde.idaho.gov](http://www.sde.idaho.gov/)

1. [Idaho ETE Networking Support Program Standards](https://cte.idaho.gov/wp-content/uploads/2018/03/Networking-Support-Program-Standards..pdf) [↑](#footnote-ref-1)