

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|--|--|
| TS | Technology and Society | |
| TS.1 | Describe how new developments in information technology affect the supply/demand characteristics of the job market. | The Four Areas of Information Technology Employment Compare and Contrast Careers in IT |
| TS.2 | Describe how information technology has changed organization structures. | Organizations |
| TS.3 | Describe how information technology has changed the breadth and level of worker responsibilities. | Organizational Responsibilities |
| TS.4 | Describe how information technology has changed the manner in which training is offered and implemented. | Compare and Contrast Careers in IT Lifelong Learning Skills Create a Professional Portfolio Information Technology Job-Specific Math Skills |
| TS.5 | Analyze and compare society's influence on information technology and information technology's influence on society. | The Four Areas of Information Technology Employment Compare and Contrast Careers in IT Entrepreneurship Lifelong Learning Skills Create a Professional Portfolio Teamwork and Collaboration Information Technology Job-Specific Math Skills IT Legal and Ethical Issues Wireless IT Computing Basics The Evolution of the Computer |

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| TS.6 | Implement problem-solving processes to evaluate and verify the nature of problems in the IT industry. | Compare and Contrast Careers in IT Positive Personal Qualities in the Workplace Teamwork and Collaboration Project Management Skills Export Data Algorithms Logic Problems Writing a Problem Statement |
| TS.7 | Explain information systems theory and practice. | Information Technology |
| TS.8 | Demonstrate knowledge of the underlying concepts of the information systems discipline. | The Four Areas of Information Technology Employment Compare and Contrast Careers in IT Entrepreneurship Assessment Lifelong Learning Skills Create a Professional Portfolio Communication Skills Positive Personal Qualities in the Workplace Diversity in the Workplace Postive Work Ethic Teamwork and Collaboration Project Management Skills Parts of an Email Message Appropriate Email Use Organizations Organizational Responsibilities Information Technology Job-Specific Math Skills IT Legal and Ethical Issues Wireless IT Computing Basics The Evolution of the Computer |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|---|---|
| TS.8 | Demonstrate knowledge of the underlying concepts of the information systems discipline. <i>(Cont'd.)</i> | Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware Network Basics Evolution of Networks Wireless Networks Network Administration History of the Internet Ethical Issues on the Internet Copyright and IP Search on the Internet Risks on the Internet Improving Network Security Software Overview Software Development Computer Operating Systems File Management File Management Tools Web Browsers Web Pages Investigate Web Design HTML Basics Create a Web Page Use CSS to Design a Web Page Add Images to a Web Page Publish to the Web Assessment in the Workplace Install the Software Spreadsheet Basics Use Spreadsheet Functions and Formulas Presentation Software Create a Presentation |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|--|---|
| TS.8 | Demonstrate knowledge of the underlying concepts of the information systems discipline. (Cont'd.) | Digital Images Create and Edit Images Digital Audio Audio Editing Techniques Digital Video Create a Multimedia Presentation Word Processing Software Basics Create and Format a Letter Format a Research Paper Create a Business Card and a Flyer Databases Database Software Basics Relating Fields and Records Creating a Database Locate and Sort Data Query Data Export Data Using Reports to Communicate Data Programming Overview Algorithms Programming Design Logic Problems Writing a Problem Statement Exploring a Problem and Communicating a Solution Using Flowcharts and Pseudocode Variables and Data Types Functions, Procedures, Arguments and Parameters Conditional Statements Iteration Internal Data Representation Integrated Development Environments Resources for Programmers Program with Variables |

| Standard ID | Standard Text | Edgenuity Lesson Name |
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| TS.8 | Demonstrate knowledge of the underlying concepts of the information systems discipline. <i>(Cont'd.)</i> | Program with Functions and Arguments Testing and Fixing Code Use Conditional Statements Use Data Structures Use Iteration Readable Code Encode and Decode Text Types of Errors Debugging a Program |
| TS.9 | Demonstrate knowledge of methods for achieving productivity in knowledge work. | Appropriate Email Use File Management File Management Tools Web Browsers Web Pages Investigate Web Design HTML Basics Create a Web Page Use CSS to Design a Web Page Add Images to a Web Page Publish to the Web Install the Software Spreadsheet Basics Use Spreadsheet Functions and Formulas Presentation Software Create a Presentation Digital Images Create and Edit Images Digital Audio Audio Editing Techniques Digital Video Create a Multimedia Presentation Word Processing Software Basics |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|--|--|
| TS.9 | Demonstrate knowledge of methods for achieving productivity in knowledge work. <i>(Cont'd.)</i> | Create and Format a Letter Format a Research Paper Create a Business Card and a Flyer Databases Database Software Basics Relating Fields and Records Creating a Database Locate and Sort Data Query Data Export Data Using Reports to Communicate Data Programming Overview Algorithms Programming Design Logic Problems Writing a Problem Statement Exploring a Problem and Communicating a Solution Using Flowcharts and Pseudocode Variables and Data Types Functions, Procedures, Arguments and Parameters Conditional Statements Iteration Internal Data Representation Integrated Development Environments Resources for Programmers Program with Variables Program with Functions and Arguments Testing and Fixing Code Use Conditional Statements Use Data Structures Use Iteration Readable Code |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|--|---|
| TS.9 | Demonstrate knowledge of methods for achieving productivity in knowledge work. (Cont'd.) | Encode and Decode Text Types of Errors Debugging a Program |
| TS.10 | Apply general systems theory to the analysis and development of an information system. | Information Technology |
| TS.11 | Identify procedures for formal problem solving. | Teamwork and Collaboration Logic Problems Writing a Problem Statement |
| TS.12 | Demonstrate knowledge of the fundamental concept of information theory and organizational system processes. | Organizations Organizational Responsibilities Information Technology |
| TS.13 | Identify the essential properties of information systems. | Information Technology |
| TS.14 | Explain information systems problem-solving techniques and approaches. | Writing a Problem Statement |
| TS.15 | Evaluate information systems problem-solving techniques and approaches. | Information Technology Databases |
| TS.16 | Explain the distinction between information and data. | Information Technology Databases |
| TS.17 | Explain the meaning and scope of information technology. | Information Technology |
| TS.18 | Explain the functions and limitations of computers in general terms. | Computing Basics The Evolution of the Computer |
| TS.19 | Explain the purpose of gathering and managing information as an integral part of conducting business. | Information Technology |
| TS.20 | Explain how information systems are used in different areas of business (customer service, inventory control, manufacturing and quality control, research and development, payroll, marketing, etc.) | Compare and Contrast Careers in IT Information Technology Wireless IT |

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| TS.21 | Explore the issues of privacy and right of access to information. | Ethical Issues on the Internet Copyright and IP Search on the Internet Risks on the Internet |
| TS.22 | Discuss ethics issues as they relate to information technology. | IT Legal and Ethical Issues |
| TS.23 | Explain the main impacts of information technology on society and the workplace. | Information Technology |
| TS.24 | Describe the main impacts of the Internet and multimedia on society, education and business. | Information Technology Job-Specific Math Skills History of the Internet |
| TS.25 | Explain the evolution of computing system architectures. | The Evolution of the Computer Network Basics History of the Internet |
| TS.26 | Discuss the trends in information technology hardware and software. | Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware Software Overview Software Development Computer Operating Systems |
| TS.27 | Explain the main advantages and disadvantages of different system architectures. | Computer Operating Systems |
| TS.28 | Conduct a simple cost/benefit analysis for different systems in different business environments. | |
| TS.29 | Explain the key differences and tradeoffs between centralized and decentralized information systems. | Evolution of Networks Network Administration |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|---|--|
| TS.30 | Explore the cost and benefit issues involved in purchasing or upgrading a computer system. | Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware |
| TS.31 | Explain the impact on efficiency during the transition to a new information system. | Upgrade Computer Hardware Wireless Networks |
| TS.32 | Generate recommendations for the design of information systems for specific business needs and environments. | Wireless Networks Network Administration |
| TS.33 | Explain the concepts of technology patenting, copyrighting and software licensing. | Copyright and IP |
| TS.34 | Explain the projected impact of the Internet on computer systems and applications. | Search on the Internet Risks on the Internet Improving Network Security |
| H | Hardware | |
| H.1 | Describe current and emerging computer architecture; configure, install, and upgrade hardware; diagnose and repair hardware problems. | The Evolution of the Computer Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware |
| H.2 | Describe interrelationships between hardware components and supportive software. | Computing Basics The Evolution of the Computer Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware Software Overview Software Development Computer Operating Systems |

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| H.3 | Diagnose hardware and supportive software problems. | Computing Basics System Maintenance |
| H.4 | Identify and use appropriate help resources (e.g., help desks, online help, and manuals) to install, configure, upgrade, diagnose, and repair hardware and solve supportive software problems. | Postive Work Ethic |
| H.5 | Evaluate the effectiveness of hardware components to solve specific problems. | System Maintenance |
| H.6 | Explain the fundamentals of operating systems. | Upgrade Computer Hardware |
| H.7 | Identify major operating system fundamentals and components. | Computer Operating Systems |
| H.8 | Explain the role of number systems in information systems. | Information Technology Job-Specific Math Skills Computing Basics |
| H.9 | Identify the role the binary and hexadecimal system in information systems. | The Evolution of the Computer |
| H.10 | Demonstrate knowledge of number systems and internal data representation. | Computing Basics |
| H.11 | Identify computer classifications and hardware. | Upgrade Computer Hardware |
| H.12 | Identify major hardware components and their functions. | Hardware Input and Output |
| H.13 | Identify the hardware associated with telecommunications functions. | System Maintenance |
| H.14 | Identify types of computer storage devices. | Hardware Input and Output |
| H.15 | Describe elements and types of information processing. | Computing Basics |
| H.16 | Identify the elements of the information processing cycle (i.e., input, process, output, and storage). | Computing Basics |

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| H.17 | Identify types of processing (e.g., batch, interactive, event-driven, object-oriented). | Computer Operating Systems |
| H.18 | Use available reference tools as appropriate. | Search on the Internet |
| H.19 | Access needed information using company and manufacturers' references (e.g., procedural manuals, documentation, standards, work flowcharts). | Resources for Programmers |
| H.20 | Describe the function of CPUs. | Computing Basics |
| H.21 | Diagram, label and describe the functions of the components of a PC system. | Hardware Input and Output System Maintenance |
| H.22 | Install, upgrade and configure hardware. | Upgrade Computer Hardware |
| H.23 | Collect and analyze system information. | File Management File Management Tools |
| H.24 | Describe and use appropriate safety precautions when working with PCs. | System Maintenance Improving Network Security |
| H.25 | Explain how hardware components interact and how conflicts arise. | Hardware Input and Output System Maintenance |
| H.26 | Identify and address various error messages and symptoms of hardware failures. | System Maintenance |
| H.27 | Identify and perform preventative maintenance procedures. | System Maintenance Upgrade Computer Hardware |
| H.28 | Install and configure peripheral devices such as mice and printers. | Sound, Graphics, and Network Cards |
| H.29 | Access and configure the CMOS set up. | Hardware Input and Output Computer Operating Systems |
| H.30 | Perform advanced preventative maintenance for hard disks using utilities software. | System Maintenance |

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| H.31 | Research and document solutions to error messages or symptoms of a hardware problem. | System Maintenance |
| OS | Operating Systems | |
| OS.1 | Identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems, environments, and utilities. | Software Overview Software Development Computer Operating Systems |
| OS.2 | Describe various types of operating systems, environments, and utilities. | Computer Operating Systems |
| OS.3 | Compare and contrast the functions, features, and limitations of different operating systems, environments, and utilities. | Computer Operating Systems |
| OS.4 | Select operating systems, environments, and utilities appropriate for specific hardware, software, and tasks. | Computer Operating Systems |
| OS.5 | Identify and use appropriate help resources (e.g., help desks, online help, and manuals) to install, configure upgrade, diagnose, and repair operating systems, environments, and utilities. | Postive Work Ethic |
| OS.6 | Employ IT knowledge and procedures when configuring or modifying an operating system to ensure optimal system functioning. | Upgrade Computer Hardware |
| OS.7 | Configure/modify system as needed. | System Maintenance Upgrade Computer Hardware |
| OS.8 | Secure needed supplies and resources. | Postive Work Ethic |
| OS.9 | Review automated scheduling software. | Software Development |
| OS.10 | Identify data requirements. | Appropriate Email Use Sound, Graphics, and Network Cards |
| OS.11 | Use operating system principles to ensure optimal system function. | Computer Operating Systems |
| OS.12 | Apply basic commands of operating system software. | Computer Operating Systems |

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| OS.13 | Apply appropriate file and disk management techniques. | File Management File Management Tools |
| OS.14 | Employ desktop operating skills. | Create a Business Card and a Flyer |
| OS.15 | Handle materials and equipment in a responsible manner. | Network Administration |
| OS.16 | Follow power-up and log-on procedures. | Hardware Input and Output |
| OS.17 | Interact with/respond to system messages using console device. | Use CSS to Design a Web Page |
| OS.18 | Follow log-off and power-down procedure(s). | System Maintenance |
| OS.19 | Use available reference tools as appropriate. | Resources for Programmers |
| OS.20 | Access needed information using appropriate reference materials. | Resources for Programmers |
| OS.21 | Document procedures and actions. | System Maintenance Upgrade Computer Hardware |
| OS.22 | Develop audit trails. | |
| OS.23 | Configure systems to provide optimal system interfaces. | System Maintenance |
| OS.24 | Perform standard computer backup procedures to protect IT information. | File Management |
| OS.25 | Explain the need for regular backup procedures. | File Management |
| OS.26 | Recognize the need for regular backup procedures. | File Management File Management Tools |
| OS.27 | Configure, perform and maintain backup procedures. | File Management File Management Tools |

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| OS.28 | Load backup software. | |
| OS.29 | Load compression drive backup software. | |
| OS.30 | Install surge suppression protection. | Digital Images |
| OS.31 | Identify battery backup equipment. | |
| OS.32 | Maintain battery backup system. | System Maintenance |
| SA | Software Applications | |
| SA.1 | Identify, evaluate, select, install, use, upgrade, and customize application software; diagnose and solve problems resulting from an application software's installation and use. | |
| SA.2 | Identify the types of application software and explain the purpose or use of each. | Upgrade Computer Hardware Software Overview |
| SA.3 | Use online and offline help to learn software. | Software Overview Software Development |
| SA.4 | Select and apply the appropriate application software to common tasks. | Software Development Computer Operating Systems |
| SA.5 | Use application software reference materials (e.g., online help, vendor Web sites, tutorials, and manuals). | Software Overview Computer Operating Systems |
| SA.6 | Use online databases, Web-based sources, and other information sources to access and retrieve information. | Resources for Programmers |
| SA.7 | Evaluate the effectiveness of software to solve specific problems. | Resources for Programmers |
| SA.8 | Import and export text, data, sound, video, and still images between software programs. | Software Overview |
| SA.9 | Explain the key functions and applications of software. | Add Images to a Web Page Create a Multimedia Presentation Locate and Sort Data |
| | | Database Software Basics |

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|-------------|---|--|
| SA.10 | Demonstrate knowledge of the key functions of systems software. | Software Overview Software Development Use Spreadsheet Functions and Formulas |
| SA.11 | Demonstrate knowledge of widely used software applications (e.g., word processing, database management, spreadsheet development). | Computer Operating Systems Use Spreadsheet Functions and Formulas Word Processing Software Basics Creating a Database |
| SA.12 | Demonstrate knowledge of the function and operation of compilers and interpreters. | Programming Overview |
| SA.13 | Demonstrate knowledge of the range of languages used in software development. | Software Development |
| SA.14 | Demonstrate knowledge of how data is organized in software development. | Software Development |
| SA.15 | Identify new and emerging classes of software. | Software Development |
| SA.16 | Verify that software to be installed is licensed prior to performing installation. | Software Overview |
| SA.17 | Verify conformance to licensing agreement. | Software Overview Software Development |
| SA.18 | Understand the concept of an End User License Agreement (EULA). | Software Overview |
| SA.19 | Differentiate between open source and proprietary licenses. | Software Overview |
| SA.20 | Explain the concept of open source. | Software Overview |
| SA.21 | Identify common characteristics of open source licensing agreements, including the GNU General Public License (GPL). | Software Overview |
| SA.22 | Perform installation accurately and completely, using available resources as needed. | Resources for Programmers |

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| SA.23 | Install given application/system software on various platforms in accordance with manufacturer's procedures. | Software Development Presentation Software Word Processing Software Basics Database Software Basics Integrated Development Environments Resources for Programmers |
| SA.24 | Disable/uninstall software that may interfere with installation of new software. | Software Overview |
| SA.25 | Differentiate between procedures for an upgrade and for a new installation. | Software Overview |
| SA.26 | Differentiate between stand-alone and network installation procedures. | Software Overview Software Development |
| SA.27 | Select appropriate installation options (e.g., default, customized). | Software Overview Software Development |
| SA.28 | Configure software to appropriate operating system settings. | Software Development Presentation Software Word Processing Software Basics Database Software Basics Integrated Development Environments Resources for Programmers |
| SA.29 | Configure macros, tools, and packages to accomplish simple organizational and personal tasks. | Software Development Presentation Software Word Processing Software Basics Database Software Basics |
| SA.30 | Convert data files if required. | Programming Overview |
| SA.31 | Verify software installation and operation. | Risks on the Internet |

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| SA.32 | Resolve problems with installation if they occur. | Risks on the Internet |
| SA.33 | Troubleshoot unexpected results. | Network Administration Create a Presentation Testing and Fixing Code Debugging a Program |
| SA.34 | Access needed help using manufacturers' technical help lines or Internet sites. | Resources for Programmers |
| SA.35 | Formulate new installation procedure if needed. | System Maintenance |
| SA.36 | Perform customization as requested. | Software Overview Export Data Using Reports to Communicate Data |
| SA.37 | Customize software to meet user preferences. | Software Overview Export Data Using Reports to Communicate Data |
| SA.38 | Document procedures, using clear and effective notes, for future use. | Appropriate Email Use Assessment in the Workplace |
| SA.39 | Document step-by-step installation and configuration procedures. | Appropriate Email Use |
| SA.40 | Analyze and inventory hardware and software to determine compatibility. | Software Overview |
| SA.41 | Install new software on standalone computers. | Software Overview |
| SA.42 | Install software in DOS and a variety of Windows type environments. | Software Development |
| SA.43 | Read and follow documentation that accompanies software products. | Software Overview Software Development |

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| SA.44 | Install software using default options. | Software Overview |
| SA.45 | Install software using customize options. | Software Overview |
| SA.46 | Modify software configuration to meet user needs and preferences. | Software Overview |
| SA.47 | Troubleshoot unexpected results during installation procedure and formulate a resolution plan. | System Maintenance Network Administration |
| SA.48 | Install application and system software on a variety of platforms. | Software Development Presentation Software Word Processing Software Basics Database Software Basics |
| SA.49 | Develop an installation plan minimizing impact on system and user. | Software Development |
| TC | Technical Communication | |
| TC.1 | Gather, evaluate, use, and cite information from information technology sources. | Resources for Programmers |
| TC.2 | Cite sources of all types of data. | Software Development Format a Research Paper Using Reports to Communicate Data Writing a Problem Statement |
| TC.3 | Analyze the effectiveness of online information resources to support collaborative tasks, research, publications, communications, and increased productivity. | Software Development Format a Research Paper Using Reports to Communicate Data Writing a Problem Statement |
| TC.4 | Use technology to enhance the effectiveness of communication. | Format a Research Paper Using Reports to Communicate Data Writing a Problem Statement |

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| TC.5 | Discuss and identify ways to keep business data secure from theft and destruction. | Improving Network Security |
| TC.6 | Use electronic messaging technologies to communicate. | Communication Skills |
| | | Positive Personal Qualities in the Workplace |
| | | Parts of an Email Message |
| | | Appropriate Email Use |
| TC.7 | Apply the rules of electronic messaging etiquette. | Appropriate Email Use |
| TC.8 | Evaluate messages and select the appropriate technology for transmitting them. | Communication Skills |
| | | Positive Personal Qualities in the Workplace |
| | | Appropriate Email Use |
| TC.9 | Discuss appropriate online behavior. | Appropriate Email Use |
| | | Ethical Issues on the Internet |
| TC.10 | Explain data communications procedures, equipment and media. | Parts of an Email Message |
| | | Ethical Issues on the Internet |
| | | Copyright and IP |
| | | Search on the Internet |
| | | Software Overview |
| | | File Management |
| | | File Management Tools |
| | | Create a Web Page |
| | | Publish to the Web |
| | | Spreadsheet Basics |
| | | Create a Presentation |
| | | Digital Images |
| | | Digital Audio |
| | | Digital Video |
| | | Create a Multimedia Presentation |
| | | Word Processing Software Basics |
| | | Format a Research Paper |

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| TC.10 | Explain data communications procedures, equipment and media. | |
| | <i>(Cont'd.)</i> | Databases |
| | | Using Reports to Communicate Data |
| | | Algorithms |
| | | Programming Design |
| | | Logic Problems |
| | | Using Flowcharts and Pseudocode |
| | | Functions, Procedures, Arguments and Parameters |
| | | Iteration |
| TC.11 | Demonstrate knowledge of key communications procedures. | |
| | | Appropriate Email Use |
| | | File Management |
| | | File Management Tools |
| | | Web Browsers |
| | | Web Pages |
| | | Investigate Web Design |
| | | Create a Web Page |
| | | Use CSS to Design a Web Page |
| | | Publish to the Web |
| | | Spreadsheet Basics |
| | | Use Spreadsheet Functions and Formulas |
| | | Presentation Software |
| | | Digital Images |
| | | Create and Edit Images |
| | | Digital Audio |
| | | Audio Editing Techniques |
| | | Digital Video |
| | | Create a Multimedia Presentation |
| | | Create and Format a Letter |
| | | Format a Research Paper |
| | | Databases |
| | | Database Software Basics |
| | | Relating Fields and Records |
| | | Creating a Database |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|---|---|
| TC.11 | Demonstrate knowledge of key communications procedures. <i>(Cont'd.)</i> | Locate and Sort Data Query Data Export Data Using Reports to Communicate Data Algorithms Programming Design Writing a Problem Statement Exploring a Problem and Communicating a Solution Using Flowcharts and Pseudocode Variables and Data Types Functions, Procedures, Arguments and Parameters Conditional Statements Internal Data Representation Integrated Development Environments Resources for Programmers Program with Variables Program with Functions and Arguments Testing and Fixing Code Use Conditional Statements Use Data Structures Use Iteration Encode and Decode Text Debugging a Program |
| TC.12 | Demonstrate knowledge of the uses of data communication equipment. | Parts of an Email Message Appropriate Email Use Wireless IT Computing Basics The Evolution of the Computer Hardware Input and Output Sound, Graphics, and Network Cards System Maintenance Upgrade Computer Hardware |

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|-------------|---|--|
| TC.12 | Demonstrate knowledge of the uses of data communication equipment. (Cont'd.) | Network Basics Evolution of Networks Wireless Networks Network Administration Copyright and IP Search on the Internet Risks on the Internet Improving Network Security Software Overview Software Development Computer Operating Systems File Management File Management Tools Web Browsers Web Pages Investigate Web Design HTML Basics Create a Web Page Use CSS to Design a Web Page Add Images to a Web Page Publish to the Web Use Spreadsheet Functions and Formulas Create a Presentation Create and Edit Images Create a Multimedia Presentation Creating a Database Locate and Sort Data Using Flowcharts and Pseudocode Use Conditional Statements Use Data Structures Use Iteration |

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| TC.13 | Demonstrate knowledge of types of communications media. | Parts of an Email Message Appropriate Email Use File Management File Management Tools Use CSS to Design a Web Page Add Images to a Web Page Publish to the Web Create a Multimedia Presentation Word Processing Software Basics Databases Using Reports to Communicate Data Resources for Programmers |
| TC.14 | Demonstrate knowledge of data transmission codes and protocols. | Appropriate Email Use File Management Tools Publish to the Web Create a Presentation Create a Multimedia Presentation Word Processing Software Basics Create and Format a Letter Format a Research Paper Create a Business Card and a Flyer Relating Fields and Records Creating a Database Using Reports to Communicate Data Using Flowcharts and Pseudocode Use Conditional Statements Use Data Structures Readable Code Encode and Decode Text Types of Errors Debugging a Program |

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| TC.15 | Distinguish between local area networks and wide-area networks. | <ul style="list-style-type: none"> Network Basics Evolution of Networks Wireless Networks Network Administration |
| TC.16 | Identify data communication trends. | <ul style="list-style-type: none"> Communication Skills Appropriate Email Use Wireless Networks Publish to the Web Using Reports to Communicate Data Programming Overview Logic Problems Writing a Problem Statement Exploring a Problem and Communicating a Solution Using Flowcharts and Pseudocode Variables and Data Types Functions, Procedures, Arguments and Parameters Conditional Statements Internal Data Representation Integrated Development Environments Use Conditional Statements Use Data Structures Use Iteration |
| TC.17 | Identify major current issues in data communications. | <ul style="list-style-type: none"> Communication Skills Appropriate Email Use Risks on the Internet Improving Network Security Publish to the Web |

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| D | Databases | |
| D.1 | Populate (enter data into) and edit fields and records. | <ul style="list-style-type: none"> Publish to the Web Create a Presentation Create a Multimedia Presentation Create and Format a Letter Create a Business Card and a Flyer Using Flowcharts and Pseudocode Use Conditional Statements Use Data Structures Use Iteration |
| D.2 | Describe search strategies and use them to solve common information problems. | <ul style="list-style-type: none"> Use Spreadsheet Functions and Formulas Locate and Sort Data Writing a Problem Statement Exploring a Problem and Communicating a Solution Encode and Decode Text Types of Errors |
| D.3 | Sort and retrieve data from databases. | Locate and Sort Data |
| D.4 | Explain the nature and interrelationships of bytes, fields, records, and databases. | <ul style="list-style-type: none"> Computing Basics The Evolution of the Computer |
| D.5 | Present the basic principles of database theory and database organization. | <ul style="list-style-type: none"> Databases Database Software Basics Relating Fields and Records Using Reports to Communicate Data |
| D.6 | Present and discuss issues of database and server security. | Locate and Sort Data |
| D.7 | Explain database design concepts and define database components. | Using Reports to Communicate Data |
| D.8 | Utilize relational databases effectively. | Using Reports to Communicate Data |

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| D.9 | Design simple database structures. | Creating a Database |
| D.10 | Create and edit tables. | Query Data Export Data Algorithms Logic Problems Functions, Procedures, Arguments and Parameters |
| D.11 | Identify and create relationships between tables. | Using Reports to Communicate Data |
| D.12 | Create and modify simple queries. | Query Data |
| D.13 | Explain the different types of queries and their purpose. | Query Data |
| D.14 | Use appropriate Boolean functions (AND, OR, NOT) in designing query statements. | Query Data |
| D.15 | Create, modify and customize simple reports. | Use Spreadsheet Functions and Formulas Create a Presentation Create and Edit Images Create a Multimedia Presentation Format a Research Paper Using Reports to Communicate Data |
| D.16 | Create, modify and customize simple forms. | Create and Format a Letter Create a Business Card and a Flyer |
| D.17 | Import and export database information from and to other applications. | Publish to the Web Export Data |
| D.18 | Explain the use of databases and information in the business environment. | Using Reports to Communicate Data |

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| D.19 | Develop database business applications. | Databases Database Software Basics Relating Fields and Records Creating a Database Locate and Sort Data Query Data Export Data Using Reports to Communicate Data |
| D.20 | Establish different levels of user access for reading and entering data into a database. | Internal Data Representation Integrated Development Environments Resources for Programmers |
| I | Internet | |
| I.1 | Describe Internet protocols. | Appropriate Email Use Ethical Issues on the Internet Copyright and IP |
| I.2 | Demonstrate knowledge of the Transmission Control Protocol/Internet Protocol (TCP/IP) suite. | IT Legal and Ethical Issues |
| I.3 | Demonstrate knowledge of management protocols, applications and procedures (e.g., SNMP, intrusion detection, and reporting issues). | History of the Internet |
| I.4 | Explain the concept of routing. | Evolution of Networks |
| I.5 | Explain Domain Name Server (DNS). | Web Browsers Web Pages Publish to the Web |
| I.6 | Demonstrate knowledge of the Domain Name System (DNS). | Web Browsers Web Pages Publish to the Web |

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| I.7 | Explain the DNS hierarchy. | Network Basics Web Browsers Web Pages |
| I.8 | Identify elements of DNS (e.g., zones, server types). | Publish to the Web |
| I.9 | Summarize Internet security issues and systems available for addressing them. | Ethical Issues on the Internet Risks on the Internet Improving Network Security |
| I.10 | Access and use Internet services when completing IT related tasks to service and update IT systems. | History of the Internet Search on the Internet Software Development Investigate Web Design Word Processing Software Basics |
| I.11 | Demonstrate the use of an Internet connection. | Software Development Computer Operating Systems |
| I.12 | Configure a small home office Internet connection using cable, DSL, wireless or satellite connection. | Evolution of Networks |
| I.13 | Test Internet connection using tools such as ping, trace route, net stat, host, dig, and nslookup. | System Maintenance |
| I.14 | Troubleshoot Internet connection problems. | System Maintenance Network Administration |
| I.15 | Demonstrate knowledge of the components of Internet software. | History of the Internet Software Overview Software Development |
| I.16 | Install Internet software for use on an operating system. | Software Development |
| I.17 | Identify common browser features. | Web Browsers |

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| I.18 | Install Internet software. | Install the Software |
| I.19 | Differentiate between Web-based applications and applications installed on a local computer. | Web Pages |
| I.20 | Download software upgrades and shareware from the Internet. | Install the Software |
| I.21 | Unpack files using compression software. | Digital Images |
| I.22 | Demonstrate acute awareness of virus protection techniques. | System Maintenance |
| I.23 | Identify types and capabilities of popular virus protection software. | System Maintenance |
| I.24 | Explain spyware, pop ups, adware, and malware. | System Maintenance |
| I.25 | Identify how to avoid spyware, adware, and malware and how to recover from infection. | System Maintenance |
| I.26 | Demonstrate knowledge of cookies and their use on an internet-connected computer system. | Improving Network Security |
| I.27 | Demonstrate knowledge of Web page basics to build an understanding of Web page design and functioning. | Web Pages |
| | | Investigate Web Design |
| | | HTML Basics |
| | | Create a Web Page |
| I.28 | Explain the features and functions of Web browsing software. | Software Overview |
| | | Web Browsers |
| I.29 | Demonstrate knowledge of the role of browsers in reading files on the World Wide Web (text-only, hypertext). | Web Browsers |
| I.30 | Identify how different browsers affect the look of a web page. | Web Browsers |
| | | Web Pages |
| I.31 | Demonstrate knowledge of the characteristics and uses of plug-ins. | Investigate Web Design |

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| I.32 | Explain the features and functions of Web page design software. | Software Overview Create a Web Page |
| I.33 | Compare/contrast the features and functions of software editors available for designing web pages. | Software Overview Create a Web Page |
| I.34 | Differentiate between a client and a server. | Network Basics |
| I.35 | Explain how traditional and modern Internet clients exploit the client/server relationship. | Network Basics Evolution of Networks Wireless Networks Network Administration |
| I.36 | Demonstrate knowledge of how bandwidths affect data transmission and on-screen image. | History of the Internet |
| I.37 | Compare the advantages and disadvantages of internal/external web hosting. | Network Basics Wireless Networks |
| E | Email | |
| E.1 | Describe and explain the purpose and basic features of e-mail systems. | Parts of an Email Message |
| E.2 | Create short, simple, concise messages. | Parts of an Email Message Appropriate Email Use |
| E.3 | Send, receive, reply, forward, save and delete messages. | Parts of an Email Message Appropriate Email Use |
| E.4 | Create, send and save attachments. | Parts of an Email Message Appropriate Email Use |
| E.5 | Use the login and password system. | Parts of an Email Message Appropriate Email Use IT Legal and Ethical Issues |

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| E.6 | Print messages, documents and files. | |
| | | Appropriate Email Use |
| E.7 | Create, save and use distribution lists. | |
| | | Appropriate Email Use |
| E.8 | Explain and use priority levels on messages. | |
| | | Appropriate Email Use |
| E.9 | Explain and actively follow guidelines for legal usage. | |
| | | Appropriate Email Use |
| E.10 | Develop a folder for saved messages and documents, and organize messages. | |
| | | Appropriate Email Use |
| E.11 | Access e-mail system support help facilities and e-mail tools. | |
| | | Appropriate Email Use |
| E.12 | Explain and use appropriate e-mail etiquette. | |
| | | Appropriate Email Use |
| E.13 | Use e-mail appropriately according to organization guidelines. | |
| | | Appropriate Email Use |
| E.14 | Use e-mail options such as "reply requested" and "out-of-office reply" | |
| | | Parts of an Email Message |
| E.15 | Explain the issues of virus contamination through e-mail, and discuss protection strategies. | |
| E.16 | Explain the role of e-mail as an integral part of the organization communication system | |
| | | Appropriate Email Use |
| E.17 | Recognize data integrity and security issues which affect e-mail usage. | |
| | | Appropriate Email Use |
| P | Programming | |
| P.1 | Identify and explain the function of common programming structures. | |
| | | Algorithms |
| | | Programming Design |
| | | Logic Problems |
| | | Using Flowcharts and Pseudocode |
| | | Functions, Procedures, Arguments and Parameters |
| | | Conditional Statements |
| | | Iteration |
| | | Program with Variables |
| | | Program with Functions and Arguments |

| Standard ID | Standard Text | Edgenuity Lesson Name |
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| P.2 | Choose the appropriate language or application development tool for the task. | Programming Design Resources for Programmers |
| P.3 | Explain the purpose and applications of computer programs. | Programming Overview Programming Design |
| P.4 | Describe and explain the steps of program development and program life cycle. | Writing a Problem Statement |
| P.5 | Describe and explain the main differences between programming languages and programming styles. | Programming Overview Programming Design |
| P.6 | Explain the main features of the different programming languages. | Programming Overview |
| P.7 | Explain the principles and process of program design. | Programming Design Writing a Problem Statement Exploring a Problem and Communicating a Solution |
| P.8 | Explain the principles of project-oriented programming style. | Programming Design |
| P.9 | Describe the functions of programming tools. | Using Flowcharts and Pseudocode |
| P.10 | Describe the required formats for and explain the purpose of data types, variables and arrays. | Variables and Data Types Program with Variables |
| P.11 | Describe the different types of controls and commands, and explain their purpose. | Functions, Procedures, Arguments and Parameters Conditional Statements Iteration Program with Functions and Arguments |
| P.12 | Explain operators, functions and procedures. | Functions, Procedures, Arguments and Parameters Conditional Statements Iteration Program with Functions and Arguments |

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| P.13 | Explain and appropriately use different decision and looping structures | Iteration |
| | | Use Iteration |
| P.14 | Develop accurate program flow charts. | Using Flowcharts and Pseudocode |
| P.15 | Design, code and debug simple programs. | Writing a Problem Statement |
| | | Exploring a Problem and Communicating a Solution |
| | | Using Flowcharts and Pseudocode |
| | | Functions, Procedures, Arguments and Parameters |
| | | Integrated Development Environments |
| | | Testing and Fixing Code |
| | | Readable Code |
| | | Encode and Decode Text |
| | | Types of Errors |
| | | Debugging a Program |
| P.16 | Present and appropriately use debugging tools and principles. | Encode and Decode Text |
| | | Types of Errors |
| | | Debugging a Program |
| P.17 | Explain and apply the documentation process throughout the program life cycle. | Programming Design |
| | | Writing a Problem Statement |
| | | Exploring a Problem and Communicating a Solution |
| | | Using Flowcharts and Pseudocode |
| P.18 | Document the design, development and testing process of a simple program. | Programming Design |
| | | Writing a Problem Statement |
| | | Exploring a Problem and Communicating a Solution |
| | | Using Flowcharts and Pseudocode |
| | | Testing and Fixing Code |
| SM | System Maintenance and Security | |
| SM.1 | Recognize and analyze potential IT security threats to develop and maintain security requirements. | Risks on the Internet |

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| SM.2 | Describe potential security threats to information systems. | Risks on the Internet |
| SM.3 | Identify the range of security needs and the problems that can occur due to security lapses. | Risks on the Internet |
| SM.4 | Assess exposure to security issues. | Risks on the Internet |
| SM.5 | Implement security procedures in accordance with business ethics. | Improving Network Security |
| SM.6 | Develop plans to address security threats. | Improving Network Security |
| SM.7 | Maintain confidentiality. | Risks on the Internet |
| SM.8 | Identify sources of virus infections. | Improving Network Security |
| SM.9 | Remove viruses. | Improving Network Security |
| SM.10 | Report viruses in compliance with company standards. | Improving Network Security |
| SM.11 | Implement backup and recovery procedures. | System Maintenance |
| SM.12 | Provide for user authentication and restricted access (e.g., assign passwords, access level). | Copyright and IP |
| SM.13 | Document security procedures. | Risks on the Internet |
| SM.14 | Maintain computer systems to ensure optimal IT system functioning. | Improving Network Security |
| SM.15 | Create a query to extract information from a file. | Copyright and IP |
| SM.16 | Create a query to extract information from multiple files. | Risks on the Internet |
| SM.17 | Create reports from queries. | Copyright and IP Risks on the Internet |
| | | Improving Network Security |

| Standard ID | Standard Text | Edgenuity Lesson Name |
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| SM.18 | Create and use logical files. | |
| | | Improving Network Security |
| SM.19 | Ensure that system is functioning optimally. | |
| | | System Maintenance |
| SM.20 | Monitor system status and performance. | |
| | | System Maintenance |
| | | Network Administration |
| SM.21 | Run diagnostics. | |
| | | Debugging a Program |
| SM.22 | Respond to system messages. | |
| SM.23 | Perform preventive maintenance procedures on computer and peripheral devices. | |
| | | System Maintenance |
| SM.24 | Optimize windows environment to maximize performance of desktop resources. | |
| | | Sound, Graphics, and Network Cards |
| | | Upgrade Computer Hardware |
| SM.25 | Review automated scheduling software. | |
| | | Software Overview |
| SM.26 | Fix and document system problems. | |
| | | Network Basics |
| SM.27 | Fix recoverable problems. | |
| | | Network Basics |
| | | Network Administration |
| SM.28 | Restore system. | |
| | | System Maintenance |
| SM.29 | Document computer system malfunction(s). | |
| | | System Maintenance |
| SM.30 | Document software malfunction(s). | |
| | | Software Development |
| SM.31 | Configure systems to provide optimal system interfaces. | |
| | | Computer Operating Systems |
| SM.32 | Configure peripheral device drivers (e.g., disk, display, printer, modem, keyboard, mouse, network). | |
| | | Sound, Graphics, and Network Cards |
| SM.33 | Apply advanced I/O concepts (e.g., disk caching, data compression, extended memory, magnetic disk/CD-ROM storage and formats). | |
| | | Hardware Input and Output |

| Standard ID | Standard Text | Edgenuity Lesson Name |
|-------------|--|------------------------------------|
| SM.34 | Allocate disk space, non-sharable resources, and I/O devices. | |
| | | Hardware Input and Output |
| N | Networking | |
| N.1 | Apply basic networking terminology to a network environment. | |
| | | Network Basics |
| | | Evolution of Networks |
| | | Wireless Networks |
| | | Network Administration |
| | | Copyright and IP |
| N.2 | Identify network devices, including network connectivity hardware, and describe their functions. | |
| | | Network Administration |
| N.3 | Explain networking concepts and principles, and different network structures. | |
| | | Wireless Networks |
| N.4 | Present and explain the design and features of LAN and WAN systems. | |
| | | Network Basics |
| N.5 | Determine hardware requirements for a workstation operating system. | |
| | | Hardware Input and Output |
| | | Sound, Graphics, and Network Cards |
| N.6 | Setup and configure a basic workstation connected to the network. | |
| | | Computing Basics |
| | | Hardware Input and Output |
| | | Sound, Graphics, and Network Cards |
| N.7 | Perform and document basic troubleshooting activities at the workstation level. | |
| | | System Maintenance |
| N.8 | Setup and configure network components such as network interface cards, printers and CD-ROM devices. | |
| | | Hardware Input and Output |
| | | Sound, Graphics, and Network Cards |
| N.9 | Determine the type of network topology needed, such as peer-to-peer and server based. | |
| | | Evolution of Networks |
| N.10 | Explain the type of wiring needed for the physical connection of the network. | |
| | | Wireless IT |
| | | Network Basics |

| Standard ID | Standard Text | Edgenuity Lesson Name |
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| TP | Technology Purchasing | |
| TP.1 | Plan the selection and acquisition of information technologies. | Information Technology |
| TP.2 | Identify sources of information technology hardware and software. | Information Technology |
| TP.3 | Identify sources for information technology hardware and software. | Upgrade Computer Hardware |
| TCES | Technology Careers, Ethics, and Safety | |
| TCES.1 | Develop the technical and interpersonal skills and knowledge to support the user community. | The Four Areas of Information Technology Employment Compare and Contrast Careers in IT |
| TCES.2 | Develop technical writing and communication skills to work effectively with diverse groups of people. | Communication Skills |
| TCES.3 | Recognize the need to maintain technical currency and the need to grow professionally. | Lifelong Learning Skills |
| TCES.4 | Design and implement risk management policies and procedures for information technology. | Ethical Issues on the Internet Risks on the Internet Improving Network Security |
| TCES.5 | Adhere to safety and security policies (e.g., acceptable use policy, Web page policies, and student photo policies). | Ethical Issues on the Internet Improving Network Security |
| TCES.6 | Adhere to federal and state laws that apply to safety and security, including laws pertaining to computer crime, fraud, and abuse. | Ethical Issues on the Internet |
| TCES.7 | Describe, analyze, develop, and follow policies for managing privacy and ethical issues in organizations and in a technology-based society. | Ethical Issues on the Internet Improving Network Security |
| TCES.8 | Adhere to and apply organization policies for privacy and intellectual property. | Improving Network Security |

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| TCES.9 | Demonstrate legal and ethical behaviors when using information technology. | Ethical Issues on the Internet |
| TCES.10 | Explain the consequences of illegal and unethical use of information technology. | Ethical Issues on the Internet |
| TCES.11 | Identify and explain property, privacy, access, and accuracy issues pertaining to information technology, including the impact of these issues on individuals and organizations. | Ethical Issues on the Internet |
| TCES.12 | Describe positions and career paths in information technology. | Copyright and IP |
| TCES.13 | Identify positions and career paths in the field of information technology. | The Four Areas of Information Technology Employment |
| TCES.14 | Identify common tasks performed by information technology workers. | The Four Areas of Information Technology Employment |
| TCES.15 | Describe education, experience, schools, and personal requirements for careers in information technology. | Compare and Contrast Careers in IT |
| TCES.16 | Identify and recognize the benefits of industry certifications in various information technology fields. | Compare and Contrast Careers in IT |
| TCES.17 | Describe techniques to identify criminal activity. | Ethical Issues on the Internet |
| TCES.18 | Identify how one files a complaint if a cybercrime is suspected or has occurred. | Ethical Issues on the Internet |
| TCES.19 | Explain legal issues faced by IT professionals. | Ethical Issues on the Internet |
| TCES.20 | Demonstrate knowledge of the legal issues that face Information Technology professionals. | Ethical Issues on the Internet |
| TCES.21 | Identify issues and trends affecting computers and information privacy. | Copyright and IP |
| TCES.22 | Explain legal issues involved in a company security policy. | Risks on the Internet |
| | | Improving Network Security |
| | | Ethical Issues on the Internet |

| Standard ID | Standard Text | Edgenuity Lesson Name |
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| TCES.23 | Identify legal issues involved concerning a security breach. | Improving Network Security |
| TCES.24 | Summarize the rights and responsibilities of IT workers. | Organizational Responsibilities Software Overview |
| TCES.25 | Identify ethical issues common to the IT field. | Ethical Issues on the Internet Copyright and IP Risks on the Internet Improving Network Security |