Department of College and Career Readiness

Principles of Information Technology Curriculum

5.0 Credits

Unit Four
Principles of Information Technology

Course Description

Principles of Information Technology explores information communication technology, introduction to Microsoft Office, information management technology, problem solving and troubleshooting:

**Introduction to Microsoft Office** - This program will begin with an introduction to the different versions of Microsoft Windows currently in use, including Windows 7, Windows 8 and Windows 10 including the use of command buttons, menus and dialog boxes used by almost all application programs. This will be followed by an in depth study of the uses of Word for school and business applications. Students will also learn how to use both Excel and PowerPoint and how to put them to use in their school work as well as business applications. Moving applications to "the cloud" will also be covered.

**Information Technology Fundamentals and Applications** - This course provides students with an introduction to information technology fundamentals encompassing both hardware and software. An emphasis is placed on the system unit components, systems and applications software and an introduction to Networking. Topics include CPU, RAM, operating system characteristics, utility programs, communication devices, media and networks. Students learn how to: efficiently search the Internet for information, use several times of productivity software.

This course will build upon students’ existing user-level knowledge and experience with personal computer software and hardware in order to present fundamental concepts and techniques that technicians will use every day on the job. Upon completing this course, students will gain the essential skills and technical expertise necessary to troubleshoot, and perform top-level maintenance on basic personal computer hardware and operating systems.

In addition, students will learn the basic knowledge and skills necessary to complete any high school or college level word processing, and presentation assignments as well as understand how to correctly maintain both the programs and hardware associated with using a personal computer.
## Principles of Information Technology

<table>
<thead>
<tr>
<th>Unit</th>
<th>Topic</th>
<th>Suggested Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>Introduction to Windows (7/8/10) and Microsoft Word</td>
<td>approx. 10 weeks</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Introduction to Excel and PowerPoint</td>
<td>approx. 7 weeks</td>
</tr>
<tr>
<td>Unit 3</td>
<td>Introduction to Personal Computers, the Internet and Application Software</td>
<td>approx. 10 weeks</td>
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<tr>
<td>Unit 4</td>
<td>System Implementation, Networking and Possible Careers in IT</td>
<td>approx. 8 weeks</td>
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</tbody>
</table>
Educational Technology Standards


- **Technology Operations and Concepts**
  - Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.

- **Creativity and Innovation**
  - Apply previous content knowledge by creating and piloting a digital learning game or tutorial.

- **Communication and Collaboration**
  - Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.

- **Digital Citizenship**
  - Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.

- **Research and Information Literacy**
  - Produce a position statement about a real world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.

- **Critical Thinking, Problem Solving, Decision Making**
  - Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.
# Career Ready Practices

Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

<table>
<thead>
<tr>
<th>CRP1. Act as a responsible and contributing citizen and employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.</td>
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<table>
<thead>
<tr>
<th>CRP2. Apply appropriate academic and technical skills.</th>
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</thead>
<tbody>
<tr>
<td>Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>CRP3. Attend to personal health and financial well-being.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</td>
</tr>
</tbody>
</table>

<table>
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<th>CRP4. Communicate clearly and effectively and with reason.</th>
</tr>
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<tbody>
<tr>
<td>Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others’ time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.</td>
</tr>
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</table>

<table>
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<tr>
<th>CRP5. Consider the environmental, social and economic impacts of decisions.</th>
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</thead>
</table>
Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.

CRP6. Demonstrate creativity and innovation.
Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

CRP7. Employ valid and reliable research strategies.
Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

CRP9. Model integrity, ethical leadership and effective management.
Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others’ action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management’s actions and attitudes can have on productivity, morals and organizational culture.
CRP10. Plan education and career paths aligned to personal goals.
Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

CRP11. Use technology to enhance productivity.
Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks—personal and organizational—of technology applications, and they take actions to prevent or mitigate these risks.

CRP12. Work productively in teams while using cultural global competence.
Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.
## Differentiated Instruction

### Strategies to Accommodate Students Based on Individual Needs

<table>
<thead>
<tr>
<th>Time/General</th>
<th>Processing</th>
<th>Comprehension</th>
<th>Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Extra time for assigned tasks</td>
<td>- Extra Response time</td>
<td>- Precise step-by-step directions</td>
<td>- Teacher-made checklist</td>
</tr>
<tr>
<td>- Adjust length of assignment</td>
<td>- Have students verbalize steps</td>
<td>- Short manageable tasks</td>
<td>- Use visual graphic organizers</td>
</tr>
<tr>
<td>- Timeline with due dates for reports and projects</td>
<td>- Repeat, clarify or reword directions</td>
<td>- Brief and concrete directions</td>
<td>- Reference resources to promote independence</td>
</tr>
<tr>
<td>- Communication system between home and school</td>
<td>- Mini-breaks between tasks</td>
<td>- Provide immediate feedback</td>
<td>- Visual and verbal reminders</td>
</tr>
<tr>
<td>- Provide lecture notes/outline</td>
<td>- Provide a warning for transitions</td>
<td>- Small group instruction</td>
<td>- Graphic organizers</td>
</tr>
<tr>
<td></td>
<td>- Reading partners</td>
<td>- Emphasize multi-sensory learning</td>
<td>- Use colors to indicate different vocabulary structure</td>
</tr>
<tr>
<td></td>
<td>- Online reading/writing programs</td>
<td>- Expensive use of prepared audio and video for alternate learning modes</td>
<td>- Use of online &quot;games&quot; for individual learning and scoring.</td>
</tr>
</tbody>
</table>

### Assistive Technology

- Computer/whiteboard
- Spell-checker
- Audio books & instruction
- Tablet/laptop for note taking
- Online books for home access

### Tests/Quizzes/Grading

- Extended time
- Study guides
- Shortened tests
- Read directions aloud

### Behavior/Attention

- Consistent daily structured routine
- Simple and clear classroom rules
- Frequent feedback

### Organization

- Individual daily planner
- Display a written agenda
- Note-taking assistance
- Color code materials
Enrichment

Strategies Used to Accommodate Based on Students Individual Needs:

- Adaption of Material and Requirements
- Evaluate Vocabulary
- Elevated Text Complexity
- Additional Projects
- Independent Student Options
- Projects completed individual or with Partners
- Self Selection of Research
- Tiered/Multilevel Activities
- Learning Centers
- Individual Response Board
- Independent On-line / Book Studies
- Open-ended activities
- Community/Subject expert mentorships
### Assessments

**Suggested Formative/Summative Classroom Assessments**

- Timelines, Charts, Graphic Organizers
- Teacher-created Unit Assessments, Chapter Assessments, Quizzes
- Teacher-created DBQs, Essays, Short Answer
- Accountable Talk, Debate, Oral Report, Role Playing, Think Pair, and Share
- Projects, Portfolio, Presentations, PowerPoint's, Prezi, Gallery Walks
- Homework
- Concept Mapping
- Primary and Secondary Source analysis
- Photo, Video, Animation, Podcast, Song Analysis
- Create an Original Song, Film, or Poem
- Create Electronic Posters
- Create a Blog or Wiki
## Interdisciplinary Connections

<table>
<thead>
<tr>
<th>English Language Arts</th>
<th>Math</th>
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</thead>
<tbody>
<tr>
<td>• Journal writing</td>
<td>• Research industry salaries for a geographic area and juxtapose against local cost of living</td>
</tr>
<tr>
<td>• Close reading of industry-related content</td>
<td>• Go on a geometry scavenger hunt</td>
</tr>
<tr>
<td>• Create a brochure for a specific industry</td>
<td>• Track and track various data, such as industry’s impact on the GDP, career opportunities or among of individuals currently occupying careers</td>
</tr>
<tr>
<td>• Keep a running word wall of industry vocabulary</td>
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<table>
<thead>
<tr>
<th>Social Studies</th>
<th>Fine &amp; Performing Arts</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Research the history of a given industry/profession</td>
<td>• Create a poster recruiting young people to focus their studies on a specific career or industry</td>
<td>• Research the environmental impact of a given career or industry</td>
</tr>
<tr>
<td>• Research prominent historical individuals in a given industry/profession</td>
<td>• Design a flag or logo to represent a given career field</td>
<td>• Research latest developments in industry technology</td>
</tr>
<tr>
<td>• Use historical references to solve problems</td>
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<td>• Investigate applicable-careers in STEM fields</td>
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<tr>
<th>World Language</th>
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<tbody>
<tr>
<td>• Translate industry-content</td>
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<tr>
<td>• Create a translated index of industry vocabulary</td>
<td></td>
</tr>
<tr>
<td>• Generate a translated list of words and phrases related to workplace safety</td>
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New Jersey Student Learning Standards

8.1—Educational Technology

Career Cluster: Applied Technology-1

- 8.1.12.A.1: Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspiration by using a variety of digital tools and resources
- 8.1.12.A.2: Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
- 8.1.12.A.3: Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.
- 8.1.12.C.1: Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.
- 8.1.12.D.1: Demonstrate appropriate application of copyright, fair use and/or Creative Commons in an original work
- 8.1.12.D.2: Evaluate consequences of unauthorized electronic access (e.g., hacking)
- 8.1.12.D.3: Compare and contrast policies on filtering and censorship both locally and globally
- 8.1.12.D.4: Research and understand the positive and negative impact of one's digital footprint.
- 8.1.12.D.5: Analyze the capacities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning and career needs.
- 8.1.12.E.1: Produce a position statement about a real world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.
- 8.1.12.E.2: Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.
- 8.1.12.F.1: Evaluate the strengths and limitations of emerging technologies and their impact on education, career, personal and or social needs.
8.2–Technology Education, Engineering, Design, and Computational Thinking-
Programming


- **8.2.12.A.1**: Create a personal digital portfolio which reflect personal and academic interests, achievements, and a career aspirations by using a variety of digital tools and resources.
- **8.2.12.A.2**: Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
- **8.2.12.A.3**: Collaborate in online courses, learning communities social networks or virtual worlds to discuss a resolution to a problem or issue.
- **8.2.12.B.1**: Research and analyze the impact of the design constraints (specifications and limits) for a product or technology driven by a cultural, social, economic or political need and publish for review.
- **8.2.12.B.3**: Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and /or needs.
- **8.2.12.B.5**: Research the historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product, and present the competing viewpoints to peers for review.
- **8.2.12.D.3**: Determine and use appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software in the design, development and creation of a technological product or system
- **8.2.12.D.4**: Assess the impacts of emerging technologies on developing countries.
- **8.2.12.E.1**: Demonstrate an understanding of the problem-solving capacity of computers in our world
- **8.2.12.E.4**: Use appropriate terms in conversation (e.g. troubleshooting, peripherals, diagnostic software, GUI, abstraction, variables, data types and conditional statements).
Common Career Technical Core (CCTC)

IT 01 – Demonstrate effective professional communication skills and practices that enable positive customer relationships.
IT 02 – Use product or service design processes and guidelines to produce a quality information technology (IT) product or service.
IT 04 – Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.
IT 05 – Explain the implications of IT on business development
IT 06 - Describe trends in emerging and evolving computer technologies and their influence on IT practices
IT 08 - Recognize and analyze potential IT security threats to develop and maintain security requirement
IT 10 - Describe the use of computer forensics to prevent and solve information technology crimes and security breaches
IT 11 - Demonstrate knowledge of the hardware components associated with information systems
IT 12 - Compare key functions and applications of software and determine maintenance strategies for computer systems.

IT-SUP3 - Apply appropriate troubleshooting techniques in resolving computer hardware, software and configuration problems.
IT-SUP6 - Evaluate the effectiveness of an information system
IT-SUP7 - Employ system installation and maintenance skills to setup and maintain an information system
IT-SUP9 - Employ technical writing and documentation skills in support of an information system.

IT-WD1 - Analyze customer requirements to design and develop a web or digital communication product
IT-WD4 - Demonstrate the effective use of tools for digital communications production, development and project management
IT-WD6 - Design, create and publish a digital communication product based on customer needs
IT-WD7 - Evaluate the functionality of a digital communication product using industry accepted techniques and metrics.
IT-WD10 - Comply with intellectual property laws, copyright laws and ethical practices when creating web/digital communications
Common Core State Standards (CCSS)

CCSS - English-Language Arts

Key Ideas and Details:

• CCSS.ELA-LITERACY.RL.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

Craft and Structure:

• CCSS.ELA-LITERACY.RL.11-12.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text.

Integration of Knowledge and Ideas:

• CCSS.ELA-LITERACY.W.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem.

Production and Distribution of Writing:

• CCSS.ELA-LITERACY.W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
Common Core State Standards (CCSS)

CCSS - Mathematics

Reason quantitatively and use units to solve problems:

- CCSS.MATH.CONTENT.HSN.Q.A.1 Use units as a way to understand problems and to guide the solution of a multi-step problems: choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

Make inferences and justify conclusions from sample surveys, experiments, and observational studies:

- CCSS.MATH.CONTENT.HSS.IC.B.6 Evaluate reports based on data.

Create equations that describe numbers or relationships:

- CCSS.MATH.CONTENT.HSA.CED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.
**Course:** Principles of Information Technology  
**Unit:** 4- System Implementation, Networking and Possible Careers in IT  
**Grade Level:** 9-12

**Unit Overview:**
This chapter will round out the rest of our Principles of Information Technology. This chapter will teach students how to implement basic personal computer file management systems and introduce students to basic computer networking. At the end of the unit, students will evaluate the many of the possible careers available to students with an interest in Information Technology.

**New Jersey Student Learning Standards (NJSLS):**

**Common Career Technical Core (CCTC):**
- IT.1, IT.2, IT.4, IT.6, IT.8, IT.10, IT.11, IT-SUP.5, IT-SUP.6, IT-SUP.9, IT-NET 1, IT-NET 2, IT-NET 4, PRG-1, PRG-4, PRG-9, IT-WD.1, IT-WD 2, IT-WD 3, IT-WD 6, IT-WD.9, IT-WD.10

**Common Core State Standards (CCSS):**
- CCSS.ELA-LITERACY.RL.11-12.1.1, CCSS.ELA-LITERACY.RL.11-12.1.6, CCSS.ELA-LITERACY.W.11-12.1.1, CCSS.ELA-LITERACY.W.11-12.1.7, CCSS.ELA-LITERACY.RL.11-12.10

<table>
<thead>
<tr>
<th>Student Learning Objectives (SLOs)</th>
<th>Essential Questions</th>
<th>Skills &amp; Indicators</th>
<th>Sample Activities</th>
<th>Resources</th>
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</table>
| The student demonstrates knowledge of the different software associated with information systems. **NJSLS:** 8.1.12.A.2, 8.1.12.A.3, 8.1.12.C.1, 8.1.12.D.1, 8.1.12.D.2, 8.1.12.E.1, 8.1.12.E.2, 8.2.12.A.1, 8.2.12.A.2, 8.2.12.B.3, 8.2.12.D.4, 8.1.12.E.1 | What is the advantage of using the cloud over hard disk storage of data? Are there any disadvantages to this? How does the OS organize files? What are files and folders? | • Demonstrate understanding of file extensions and the purpose of file types across software products. • Identify a file type by looking at its extension • Identify appropriate use of application | **Skills Review**  
- Research 4 Cloud storage services and create a chart of your evaluations.  
- Create a chart of the most common file extensions for Image, Audio, Video and Executable file types.  
- Create a new library | Microsoft Office 2013-Passaic Community College Edition  
Learning Microsoft® Office 2013 Pearson Publishing Co.  
The Up to Date Guide for Building a Hackintosh |
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| CCTC: IT 1, IT 4, IT 6, IT 8, IT 10, IT-SUP 9, IT-PRG 3, IT-WD 3, IT-WD 6 | What are libraries and how do they work? What is File explorer? Are there different ways I can sort and view my files and folders? | software  
- Demonstrate proper file management techniques such as creating, naming, organizing, copying, moving, and deleting files.  
- Explain Cloud storage and its uses. | and add multiple types of files to it.  
- Critical Thinking  
It is fairly easy to install Windows on a MAC PC. You can also, with a little more effort install the MAC OS onto a Windows PC. The later is sometimes referred to as a "Hackintosh". What are the benefits to doing this? This violates Apple's End-user agreement. Does that make it illegal for you to do on the computer YOU own? Do you think if APPLE changed this to allow its computers to run Windows software would it help or hurt Apple? Document your answers!! | http://lifehacker.com/the-always-up-to-date-guide-to-building-a-hackintosh-o-5841604 |
| CCSS: CCSS.ELA-LITERACY.RL.11-12.1.1, CCSS.ELA-LITERACY.RL.11-12.1.6, CCSS.ELA-LITERACY.W.11-12.1.1, CCSS.ELA-LITERACY.W.11-12.1.7, CCSS.ELA-LITERACY.RL.11-12.10, Q.A.1, HSS.1.C.B.6, HSA.CED.A.4 | | | | Is it Illegal to Make a Hackintosh?  
| | | | | What is Cloud Computing?  
https://www.udemy.com/introduction-to-cloud-computing/learn/v4/overview |
| | | | | What is the Cloud?  
https://acloud.guru/learn/intro-cloud-computing |
| | | | | What is a File Extension?  
http://www.bleepingcomputer.com/tutorials/what-is-a-file-extension/ |
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</table>
| Students will have a clear understanding of how computer networks function. **NJSLS:** 8.1.12.A.3, 8.1.12.C.1, 8.1.12.D.2, 8.1.12.D.5, 8.1.12.E.1, 8.1.12.E.2, 8.2.12.F.1, 8.2.12.A.3, 8.2.12.B.1, 8.2.12.B.3, 8.2.12.D.4, 8.2.12.D.6, 8.1.12.E.4 **CCTC:** IT 1, IT 4, IT 5, IT 6, IT 10, IT-SUP 9, IT-NET 1, IT-WD 4, IT-WD 6, IT-WD 10 **CCSS:** CCSS.ELA-LITERACY.RL.11-12.1.1, CCSS.ELA-LITERACY.RL.11-12.1.6, CCSS.ELA-LITERACY.W.11-12.1.6, CCSS.ELA-LITERACY.W.11-12.1.1, CCSS.ELA-LITERACY.W.11-12.1.7, CCSS.ELA-LITERACY.RL.11-12.10, Q.A.1, HSS.1C.B.6, HSA.CED.A.4 | What is a network and what are network's advantages and disadvantages? What are the different ways to classify networks? Which type of network is most commonly found in the home? What are the main components of every network? What are my options for connecting a network? Can I get internet without having to pay for it? | ▪ Use Start button to find an Office app ▪ Create and save files. ▪ Rename files and move files ▪ Open, edit, copy and save files. ▪ Copy data from One Office app to another ▪ Use templates to create docs ▪ Print a document. ▪ Format text using the Mini toolbar and the ribbon | Skills Review ▪ Make a list of the 5 network architectures defined by distance and the use of all. ▪ Using a laptop or scanner find a specified WiFi signal. ▪ Watch the movie GATTACA and complete the worksheet associated with it. **Critical Thinking** As a group, choose one of the following topics to discuss and justify your view. ▪ A BAN can be used to monitor critical medical data. Do you think BANs are useful? Are there concerns or risks that BAN’s might present? | Microsoft Office 2013-Passaic Community College Edition Learning Microsoft® Office 2013 Pearson Publishing Co. Karma Wi-Fi Hotspot [http://www.pcmag.com/article2/0,2817,2454891,00.asp](http://www.pcmag.com/article2/0,2817,2454891,00.asp) GATTACA- movie (Rent from local library) 1984 - Movie [https://www.youtube.com/watch?v=ajWC_JjgLc](https://www.youtube.com/watch?v=ajWC_JjgLc) 7 things you should know about Body Area Networks (BANs) [www.zdnet.com/article/7-things-you-should-know-about-body-area-](www.zdnet.com/article/7-things-you-should-know-about-body-area-)
<table>
<thead>
<tr>
<th>Student Learning Objectives (SLOs)</th>
<th>Essential Questions</th>
<th>Skills &amp; Indicators</th>
<th>Sample Activities</th>
<th>Resources</th>
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**Skills Review**
- Write instructions for setting up a simple home network.
- List the main components of every network.
- Discuss the benefits of fiber-optic vs. twisted wire pair.

**The Internet of Things**
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</thead>
</table>
| **CCTC:** IT 4, IT 8, IT 11, IT-SUP 5, IT-NET 1, IT-NET 2, IT-WD 10 | network vulnerable? | that should be included in your home network either wired or wirelessly. | **Editorial**  
• Is privacy a concrete law or a flexible one? | **8 Advantages Of Choosing Fiber Over Copper Cable**  
**10 things to look for in an ISP**  
**Everything You Need to Know About Home Networking**  
**How to keep your connected home safe**  
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</thead>
</table>
| Students will become knowledgeable in methods used to secure networks, users and data. | - What are the security implications of setting up a wired or wireless home network?  
- How can I transfer what I know to new technological situations and experiences?  
- What are my responsibilities for using technology?  
- Should the Govt. have access to your computer/Smartphone passwords? | - Set up a firewall based on an ACL list  
- Define the purposes of a router  
- Describe the pros and cons of using content filtering software  
- What are the network function tests performed with a cable testing device?  
- List 3 methods of internet/network security and when each is used. | - Write a position paper about the government's use of internet surveillance to spy on U.S. citizens.  
- Watch two movies about cybercrime, The Net (1995) and Blackhat (2015) and have students compare the technology and security issues that have changed in the past 20 years.  
- Create an electronic timeline of the progress in computing over the past 25 years. | can-take-to-boost-home-security.html |
Certification EXAM Guide – ILT Series  
Apple’s fight with the FBI could lead to a |
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<th>Sample Activities</th>
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<tr>
<td>Students will consider the vast array of jobs available to those who have knowledge of computer technology. <strong>NJSLS:</strong> 8.1.12.A.1, 8.1.12.A.3, 8.1.12.B.2, 8.1.12.D.1, 8.1.12.F.1, 8.2.12.E.1, 8.1.12.E.4 <strong>CCTC:</strong> IT 1, IT 4, IT-SUP 9, IT-PRG 1, IT-PRG 4, IT-WD 3, IT-WD 4, IT-WD 10 <strong>CCSS:</strong> CCSS.ELA-LITERACY.RL.11-12.1.1, CCSS.ELA-LITERACY.RL.11-12.1.6, CCSS.ELA-LITERACY.W.11-12.1.1, CCSS.ELA-LITERACY.W.11-12.1.7,</td>
<td><strong>Why computer science?</strong>  Are IT jobs going &quot;offshore&quot;?  Do women have an equal opportunity in IT jobs?  Where do you want to work?  What do colleges expect from you?  Does it help to be bilingual?</td>
<td>• Outline the strategies you can use to stay ahead and be successful in a computer career  • Discuss the advantages and disadvantages of specialization  • Describe how you would stay alert for organizational changes</td>
<td>• Review at least 5 tech careers and the responsibilities that go with those positions.  • Using the Government job site determine the job requirements for those jobs.  • Take a career skills profiler and confirm what careers are best for you.  • Go to at least 5 University/college sites and find what classes are required to be any form of IT major.</td>
<td>password arms race. <a href="http://www.computerworld.com/article/3035538/mobile-security/apples-fight-with-the-fbi-could-lead-to-a-password-arms-race.html">http://www.computerworld.com/article/3035538/mobile-security/apples-fight-with-the-fbi-could-lead-to-a-password-arms-race.html</a>  <strong>Computing Essentials</strong> McGraw-Hill Company  <strong>O-NET Online</strong> <a href="http://www.onetonline.org/link/summary/15-1121.00?redir=15-1051.00">http://www.onetonline.org/link/summary/15-1121.00?redir=15-1051.00</a>  <strong>Women in Tech: The Facts</strong> <a href="https://www.ncwit.org/resources/women-it-facts-infographic-2015-update">https://www.ncwit.org/resources/women-it-facts-infographic-2015-update</a>  <strong>The Value of Spanish in the Workplace</strong> <a href="http://www.monster.com/career">http://www.monster.com/career</a></td>
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<td>CCSS.ELA-LITERACY.RL.11-12.10, Q.A.1, HSS.1.C.B.6, HSA.CED.A.4</td>
<td>Students will be able to put together lessons learned to modify a simple website and make it their own. <strong>NJSLS:</strong> 8.1.12.A.2, 8.1.12.D.1, 8.2.12.A.3, 8.2.12.B.3, 8.1.12.E.4</td>
<td>• Describe graphics software, including desktop publishing, image editors, illustration programs, image galleries, and graphic suites. • Discuss audio and video editing software • Describe multimedia including links, buttons, and multimedia authoring programs. • Explain Web authoring, Web site design, and Web authoring programs.</td>
<td>• Use lesson from &quot;The Hour of Code&quot; to create simple JavaScript • Review at least 4 free website building sites and decide which you would use and why. • Create a website that will incorporate the lessons learned.</td>
<td>Computing Essentials McGraw-Hill Company</td>
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<td></td>
<td>What do I want to create a website about? How can companies provide these tools for free? How would I get traffic to my website? What is WYSIWYG? What is HTML? What are Image Galleries? What is the &quot;job&quot; of a website homepage?</td>
<td></td>
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<td>Top Website Builders [<a href="http://website">http://website</a> builders.thetop10sites.com/best-website-creators.html?matchtype=b&amp;keyword=%2Bcreate%20%2Bfree%20%2Bwebsite&amp;adposition=1t3&amp;creative=87931554564&amp;ac eid=&amp;utm_campaign=TT10S_Builders_Free_USA&amp;gclid=CjwKEAjww_a8B RDB-O-OqZb_vRASJAA9yc5ghug3QpbzHTRdGnSGsq5z7TkqFR-8SH2NyC1YpxhRoC-Dnw_wcB](<a href="http://website">http://website</a> builders.thetop10sites.com/best-website-creators.html?matchtype=b&amp;keyword=%2Bcreate%20%2Bfree%20%2Bwebsite&amp;adposition=1t3&amp;creative=87931554564&amp;ac eid=&amp;utm_campaign=TT10S_Builders_Free_USA&amp;gclid=CjwKEAjww_a8B RDB-O-OqZb_vRASJAA9yc5ghug3QpbzHTRdGnSGsq5z7TkqFR-8SH2NyC1YpxhRoC-Dnw_wcB)</td>
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<td>HSA.CED.A.4</td>
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<td><a href="http://www.inmotionhosting.com/support/edu/website-design/website-design-basics/introduction-web-design">http://www.inmotionhosting.com/support/edu/website-design/website-design-basics/introduction-web-design</a></td>
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<td><strong>Introduction to Web Design</strong> <a href="https://www.youtube.com/watch?v=p77Z1TcCzxI">https://www.youtube.com/watch?v=p77Z1TcCzxI</a></td>
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<td><strong>20 Things Your Website Should Do and 5 Things It Shouldn’t</strong> <a href="http://smallbiztrends.com/2013/10/things-your-website-should-do.html">http://smallbiztrends.com/2013/10/things-your-website-should-do.html</a></td>
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<td>Applet</td>
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<td>Manage</td>
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<td>Argument</td>
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<td>As well</td>
<td>Design</td>
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<td>Development</td>
<td>Programming language</td>
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<td>Back</td>
<td>Effectively</td>
<td>Sandbox</td>
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<td>Boolean</td>
<td>Familiarity</td>
<td>Subset</td>
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<td>Browser</td>
<td>Hello world</td>
<td>Tool</td>
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<td>Business</td>
<td>HTML</td>
<td>Variable</td>
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<td>Concern</td>
<td>Internet</td>
<td>Web development</td>
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<td>JavaScript</td>
<td>Webpage</td>
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<td>Consist</td>
<td>Machine language</td>
<td>Zombie</td>
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## Suggested Unit Projects

**Choose At Least One**

| Using the data collected during this unit, create a professional looking resume of a recent college graduate listing experiences and classes that a college graduate looking for a position in IT might have. | Create a "professional" website on a topic of interest to the students integrating information learned in this class. |

## Suggested Structured Learning Experiences

| Manna Design Works  
P.O. Box 190  
Glassboro, NJ 08028  
856-881-7650  
Stacey Levine  
LinkedIn corporate communication director  
350 5th Ave (at Empire State Bldg)  
New York, NY 10118  
United States  
[https://www.linkedin.com/in/staceyjoylevine](https://www.linkedin.com/in/staceyjoylevine) |
| Store Visit to  
MicroCenter  
263 McLean Blvd.  
Route 20 Retail Center  
Paterson, NJ 07504  
(973) 653-2187 |  |