CTE Standards Unpacking
Foundations of Technology

Course: Foundations of Technology
Course Description: The student will learn to identify the general usage of technology, software, and applications. Utilizing that knowledge, this course will cover topics such as, but not be limited to, word processing, spreadsheets, presentations, operating systems, Internet browsers, search engines, databased, preventive maintenance and security, digital literacy, netiquette and citizenship. This course expands the student's skills, knowledge and confidence in various forms of software platforms and applications (e.g. PC, Mac, Google Apps, smart phone, apps, etc.)
Career Cluster: All
Prerequisites: None
Program of Study Application: Foundations of Technology is a foundation course that is intended to precede further studies at the career cluster and career pathway levels.

INDICATOR #FT 1: **Create and format word processing documents for a variety of personal and work applications**
SUB-INDICATOR 1.1 (Webb Level: 2 Skill/Concept): Modify and manipulate paragraphs and paragraph formatting
SUB-INDICATOR 1.2 (Webb Level: 2 Skill/Concept): Use tables to enhance documents
SUB-INDICATOR 1.3 (Webb Level: 2 Skill/Concept): Customize document formatting
SUB-INDICATOR 1.4 (Webb Level: 2 Skill/Concept): Create a mail merge document
SUB-INDICATOR 1.5 (Webb Level: 2 Skill/Concept): Create and use features of word processing software
SUB-INDICATOR 1.6 (Webb Level: 2 Skill/Concept): Format characters
SUB-INDICATOR 1.7 (Webb Level: 2 Skill/Concept): Use Help features

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Knowledge of document formatting

Knowledge of word processing features

Vocab: manipulate, watermark, macros, data source, mail merge, worksheet, header or footer, mickey mouse character footnote and endnote, , | Important to know how to create and format word processing documents for personal and work purposes | *Customize document formatting
*Create mail merge document
*Create and use features of word processing software
*Format characters
*Use Help features |

Benchmarks

Students will be assessed on their ability to:

- Create and modify a document using formatting
- Create a mail merge

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard):	**Sample Performance Task Aligned to the Academic Standard(s):**
W4 – Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks. SL4 – Present information findings and supporting evidence clearly and logically	Use word processing to create a letter about your dream vacation

INDICATOR #FT 2: Create and format spreadsheets for a variety of personal and work applications
SUB-INDICATOR 2.1 (Webb Level: 2 Skill/Concept): Format a spreadsheet to enhance its appearance
SUB-INDICATOR 2.2 (Webb Level: 2 Skill/Concept): Insert formulas into a worksheet to enhance its functionality
SUB-INDICATOR 2.3 (Webb Level: 2 Skill/Concept): Manipulate data within and between workbooks
SUB-INDICATOR 2.4 (Webb Level: 2 Skill/Concept): Create charts within a spreadsheet to represent data graphically

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Knowledge of spreadsheet formatting Knowledge of inserting a formula	Understand the importance of formatting spreadsheets for personal and work purposes	*Format spreadsheet *Insert formulas *Manipulate data *Create charts

Knowledge of spreadsheet features Vocab: Workbook, worksheet, formula, cell,		

Benchmarks

Students will be assessed on their ability to:

- Create a spreadsheet including formulas and charts within a workbook

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): M.7.MS - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	**Sample Performance Task Aligned to the Academic Standard(s):** Create a budget for your dream vacation. Including formulas and charts

INDICATOR #FT 3: **Create and format professional presentations**		
SUB-INDICATOR 3.1 (Webb Level: 2 Skill/Concept): Create a presentation using presentation software		
SUB-INDICATOR 3.2 (Webb Level: 2 Skill/Concept): Modify a presentation		
SUB-INDICATOR 3.3 (Webb Level: 2 Skill/Concept): Add visual appeal and animation to a presentation		
SUB-INDICATOR 3.4 (Webb Level: 2 Skill/Concept): Add visual elements to a presentation		
SUB-INDICATOR 3.5 (Webb Level: 2 Skill/Concept): Share and present professional presentations		
Knowledge (Factual):	**Understand (Conceptual):**	**Skills (Application):**
Knowledge of various professional presentation software	The Importance of creating professional presentations in the workplace	*Create and modify a presentation using presentation software *Add visual elements to a

		presentation

Benchmarks
Students will be assessed on their ability to:
- Create a presentation
- Present a presentation

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Academic Connections

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ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard):	Sample Performance Task Aligned to the Academic Standard(s):
W4 – Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks.	Give a presentation on your dream vacation using a professional presentation source

INDICATOR #FT 4: Demonstrate and communicate an understanding of an operating system's file management system

SUB-INDICATOR 4.1 (Webb Level: 2 Skill/Concept): Use an operating system's file manager to navigate using various methods to different locations and manage files

SUB-INDICATOR 4.2 (Webb Level: 3 Strategic Thinking): Manipulate the operating system's built-in search features

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Knowledge of an operating system's file management system Vocab: File manager, operating system, shortcut keys, web browser,	Understand how to use an operating system's file management system	Demonstrate how to operate the system's file management system

Benchmarks

Students will be assessed on their ability to:

- Use shortcut keys
- Use built – in search to find specific file type

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**Sample Performance Task Aligned to the Academic Standard(s):** Save a shortcut to the desktop of favorite webpage and resave to a network location

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INDICATOR #FT 5: Manage administrative features of an operating system

SUB-INDICATOR 5.1 (Webb Level: 2 Skill/Concept): Demonstrate knowledge of features in the operating system

SUB-INDICATOR 5.2 (Webb Level: 3 Strategic Thinking): Analyze operating system capabilities and restrictions

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Know the administrative features of an operating system Know different operating system capabilities and restrictions Vocab: operating system, task manager, shortcut keys,	Understand how to manage administrative features of an operating system	* Demonstrate knowledge of features in the operating system * Analyze operating system capabilities and restrictions

Benchmarks

Students will be assessed on their ability to:

- Compare and contrast two different operating systems
- Change the audio settings

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**Sample Performance Task Aligned to the Academic Standard(s):** Write down differences between two different operating systems (for example: PC and Mac)

INDICATOR #FT 6: **Distinguish and apply key elements of Internet browsers and search engines**		
SUB-INDICATOR 6.1 (Webb Level: 2 Skill/Concept): Demonstrate advanced search techniques within a search engine		
SUB-INDICATOR 6.2 (Webb Level: 2 Skill/Concept): Analyze different search engines		
SUB-INDICATOR 6.3 (Webb Level: 2 Skill/Concept): Evaluate different Internet browsers		
Knowledge (Factual): Knowledge of advanced search techniques Knowledge of various internet browsers available Knowledge of different search engines Vocab: Boolean, domain, search engine, real time, clustering, internet browser, directory sites	**Understand (Conceptual):** Understand how key elements of Internet browsers and search engines affect different results	**Skills (Application):** *Demonstrate advanced search techniques within a search engine *Analyze different search engines *Evaluate different Internet browsers

Benchmarks
Students will be assessed on their ability to:
- Compare search phrases

- Assess validity and quality of Internet browser
- Compare various search engines

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W6 - Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**Sample Performance Task Aligned to the Academic Standard(s):** Use two different search engines and Internet browsers to compare the results on a topic of choice

INDICATOR #FT 7: Understand how to create a database table and forms using database software.
SUB-INDICATOR 7.1 (Webb Level: 2 Skill/Concept): Create a database table
SUB-INDICATOR 7.2 (Webb Level: 2 Skill/Concept): Create relationships between database tables
SUB-INDICATOR 7.3 (Webb Level: 2 Skill/Concept): Perform queries and filter records
SUB-INDICATOR 7.4 (Webb Level: 2 Skill/Concept): Create forms in the database
SUB-INDICATOR 7.5 (Webb Level: 2 Skill/Concept): Create reports in the database

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Knowledge of database table, forms and reports Vocab: queries, duplicate query, unmatched query aggregate, database, design view, report view,	Understand the importance of creating a database table and forms using database software	* Create a database table * Create relationships between database tables * Perform queries and filter records *Create forms and reports in the database

Benchmarks

Students will be assessed on their ability to:
- Create a database
- Perform a query
- Create a form
- Create a report

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**Sample Performance Task Aligned to the Academic Standard(s):** Create a database with student demographic information. Perform a query and print report

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INDICATOR #FT 8: Demonstrate an understanding of computer preventive maintenance and security

SUB-INDICATOR 8.1 (Webb Level: 2 Skill/Concept): Demonstrate various methods of backing up files using different options

SUB-INDICATOR 8.2 (Webb Level: 2 Skill/Concept): Conduct Internet browser maintenance

SUB-INDICATOR 8.3 (Webb Level: 2 Skill/Concept): Explain the importance of antivirus software

SUB-INDICATOR 8.4 (Webb Level: 2 Skill/Concept): Communicate an understanding of the importance of password creation and management

Knowledge (Factual):	Understand (Conceptual):	Skill (Application):
Knowledge of methods to back up files. Knowledge of antivirus software and browser maintenance Knowledge of password creation and	Understand the importance of computer preventive maintenance and security	*Demonstrate various methods of backing up files using different options *Conduct Internet browser maintenance *Explain the importance of antivirus software

management Vocab: cache, default configuration, external drive, bookmark, extensions, antivirus, operating systems		*Communicate an understanding of the importance of password creation and management

Benchmarks

Students will be assessed on their ability to:

- Create a password with complexity
- Conduct an antivirus scan
- Clear your browser cache
- Create a backup file

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**Sample Performance Task Aligned to the Academic Standard(s):** Research the implications of poor computer preventive maintenance and security

INDICATOR #FT 9: **Develop digital literacy, netiquette and citizenship skills**
SUB-INDICATOR 9.1 (Webb Level: 3 Strategic Thinking): Demonstrate an understanding of the importance of privacy and security within relevant technological tools
SUB-INDICATOR 9.2 (Webb Level: 3 Strategic Thinking): Analyze the effect of technology on relationships and communication
SUB-INDICATOR 9.3 (Webb Level: 3 Strategic Thinking): Demonstrate the complexity of safe, legal and responsible creation of digital footprints and reputations
SUB-INDICATOR 9.4 (Webb Level: 3 Strategic Thinking): Follow ethical and legal guidelines in gathering and using digital information and applications
SUB-INDICATOR 9.5 (Webb Level: 3 Strategic Thinking): Effectively decipher reliable information on the web

Knowledge (Factual):	Understand (Conceptual):	Skills (Application):
Knowledge of importance of privacy and security within relevant technological tools Knowledge of the effects technology on relationships and communication Knowledge of digital footprints and online reputations Knowledge of ethical and legal guidelines in gathering and using digital information Knowledge of reliable vs unreliable information Vocab: digital literacy, netiquette, citizenship, cyberbullying, digital footprint, firewall, avatar,	Understand the importance of digital literacy, netiquette and citizenship skills	* Demonstrate an understanding of the importance of privacy and security within relevant technological tools * Analyze the effect of technology on relationships and communication * Demonstrate the complexity of safe, legal and responsible creation of digital footprints and reputations * Follow ethical and legal guidelines in gathering and using digital information and applications * Effectively decipher reliable information on the web

Benchmarks
Students will be assessed on their ability to:
- Install a firewall
- Create a personal cyberbullying statement
- Create a professional email
- Investigate present day legal cases concerning Internet crimes
- Develop a digital code of ethics
- Effectively decipher reliable information on the web

Academic Connections	
ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard): W6 - Use technology, including the Internet, to produce, publish, and update	**Sample Performance Task Aligned to the Academic Standard(s):** Research and present a present day legal case concerning Internet crimes

individual or shared writing products in response to ongoing feedback, including new arguments or information.

W7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

W4 – Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks.

SL4 – Present information findings and supporting evidence clearly and logically

Additional Resources

Please list any resources (e.g., websites, teaching guides, etc.) that would help teachers as they plan to teach these new standards.

Netsmartz.org, http://zapatopi.net/treeoctopus/sightings.html