

Unit 1 Orientation and Digital Citizenship ¹

1.1 Identify school policies, program policies, and safety procedures related to Cyber Foundations I. ^{1.1}

- a Examine school handbook, the technology acceptable use policy, and other safety procedures for building level situations. ^{1.1a}
- b Preview course outline and its relevance in today's workforce. ^{1.1b}
- c Recognize appropriate safety measures related to technology in the computer lab and online safety. ^{1.1c}

1.2 Investigate social and ethical issues related to Digital Citizenship and Social Media ^{1.2}

- a Media Habits - Identify personal media habits, and how much time is spent with different forms of media. ^{1.2a}
- b Discuss the pros and cons of social media when used personally, educationally, and professionally ^{1.2b}
- c Creative Responsibilities – Identify user responsibilities to respect others' creative work ^{1.2c}
- d Internet Safety – Identify strategies to determine inappropriate contact and positive connections when collaborating online. ^{1.2d}
- e Online Personalities – Discuss the outcomes of creating different online personalities ^{1.2e}
- f Cyberbullying – Explore cyberbullying behaviors and how it impacts individuals and communities and discuss the consequences. ^{1.2f}

1.3 Collaborate with teachers, peers, and course material using a learning management system. ^{1.3}

- a Discover online learning environments and how they operate among teachers and students. ^{1.3a}

1.4 Compare/contrast career opportunities within the Law, Public Safety, Corrections, and Security career cluster ^{1.4}

- a Research career opportunities for employment in law, public safety, corrections, and security by exploring the Law, Public Safety, Corrections, and Security career cluster ^{1.4a}
- b Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the Law, Public Safety, Corrections, and Security career cluster. ^{1.4b}

Unit 2 Student Organizations 2

2.1 Recognize opportunities to participate in student organizations related to technology and business. 2.1

- a** Identify student organizations available at the school for technology and business students. 2.1a
- b** List student competitions available through each organization 2.1b

2.2 Recognize how a business meeting is conducted (must be used at least twice) 2.2

- a** Illustrate the opening of a business meeting. 2.2a
- b** Illustrate the closing of a business meeting. 2.2b

2.3 Identify leadership and personal development styles 2.3

- a** List the characteristics of an effective leader. 2.3a
- b** Explore the characteristics of personal development 2.3b

Unit 3 21st Century Tool Box 3

3.1 Differentiate between various learning styles and personality traits found within the classroom and workplace. 3.1

- a** Complete learning styles inventory. 3.1a
- b** Identify personality traits and complete a personality self-test. 3.1b
- c** Discuss strategies people can use to work effectively with one another regardless of personal differences 3.1c

3.2 Demonstrate effective time management skills, study skills and note-taking strategies. 3.2

- a** Develop short- and long-term personal goals 3.2a
- b** Develop short- and long-term personal goals 3.2b
- c** Demonstrate use of technology to master study skills and time management skills. 3.2c

3.3 Demonstrate use of technology to master study skills and time management skills. 3.3

- a** Use career planning software to become familiar with the 16 National Career Clusters and the opportunities for employment with each. 3.3a

3.4 Complete interest profiler and career exploration exercises. 3.4

- a** Complete career interest survey and log results. 3.4a
- b** Explore career options in career cluster(s) of choice. 3.4b

3.5 Develop an Individual Success Plan (ISP) *3.5*

- a** Link the ISP to the 16 national career clusters and to secondary and postsecondary education. *3.5a*
- b** Link the ISP to the 16 national career clusters and to secondary and postsecondary education. *3.5b*

- c** Identify, select, and print courses that meet graduation requirements and reflect the ISP. *3.5c*

3.6 Demonstrate effective public speaking skills. *3.6*

- a** Demonstrate effective communication in groups. *3.6a*
- b** Demonstrate presentation skills. *3.6b*

3.7 Demonstrate knowledge of 21st Century skills. *3.7*

- a** Demonstrate effective collaboration and teamwork. *3.7a*
- b** Demonstrate creativity and imagination. *3.7b*
- c** Utilize critical thinking where appropriate. *3.7c*
- d** Execute problem solving techniques. *3.7d*

Unit 4 Keyboarding ⁴

4.1 Demonstrate an understanding of basic keyboarding information. ^{4.1}

- a Define vocabulary associated with keyboarding. ^{4.1a}
- b Examine keyboarding and workspace ergonomics. ^{4.1b}
- c Investigate various keyboard layouts. ^{4.1c}

4.2 Perform keyboarding applications. ^{4.2}

- a Demonstrate proper hand, finger, and body position when using a keyboard. (ongoing) ^{4.2a}
- b Use correct finger reaches on home row and from home row to top and bottom row keys. (ongoing) ^{4.2b}
- c Perform touch typing by keying words, sentences, and paragraphs. (ongoing) ^{4.2c}
- d Demonstrate speed and accuracy with the touch keyboard. ^{4.2d}
- e Identify basic key functions and keyboard shortcut commands associated with the QWERTY keyboard. ^{4.2e}

4.3 Investigate keyboarding skills and computer science in the context of Business Management and Administration career cluster. ^{4.3}

- a Research career opportunities for employment in Business Management and Administration Career Cluster by exploring the Business Management and Administration Career Cluster. ^{4.3a}
- b Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the Business Management and Administration Career Cluster career cluster. ^{4.3b}
- c Discuss how computer science impacts the Business Management and Administration Career Cluster career cluster. ^{4.3c}

Unit 5 Word Processing Applications 5

5.1 Perform basic word processing applications 5.1

- a Use basic word processing commands to create, format, edit, and print basic documents. 5.1a
- b Apply word processing features using appropriate ribbons to perform additional formatting tasks. 5.1b
- c Manage and manipulate files within a word processing application. 5.1c

5.2 Generate documents using word processing applications. 5.2

- a Explore reports written in various formatting styles, such as APA and MLA. 5.2a
- b Cite references in various citation formats. 5.2b
- c Use various research tools to create a research paper in a school-preferred formatting style. 5.2c
- d Create business correspondence, such as letters and emails, using proper business/industry formatting techniques. 5.2d

5.3 Perform desktop publishing tasks 5.3

- a Distinguish between high- and low-quality desktop publishing documents (flyers, newsletters, brochures, etc.). 5.3a
- b Create and manipulate basic desktop publishing features (lines, shapes, clipart, Smart Art, columns, tables, text boxes, etc.). 5.3b
- c Manipulate graphics and objects by moving, sizing, grouping, and changing order and/or color. 5.3c
- d Create effective desktop publishing documents (flyers, newsletters, brochures, etc.) 5.3d

5.4 Investigate career opportunities in the Hospitality and Tourism career cluster 5.4

- a Research career opportunities for employment in Hospitality and Tourism career cluster by exploring the Hospitality and Tourism career cluster. 5.4a
- b Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the Hospitality and Tourism career cluster. 5.4b
- c Discuss how computer science impacts the Hospitality and Tourism career cluster 5.4c

Unit 6 Spreadsheet Applications and Financial Literacy ⁶

6.1 Organize personal finances and use a budget to manage cash flow, plan for spending, and save for future goals. *6.1*

- a** Develop a plan for spending and saving. *6.1a*
- b** Describe how to use different payment methods. *6.1b*
- c** Apply consumer skills to spending and saving decisions *6.1c*

6.2 Use a career plan to develop personal income potential. *6.2*

- a** Explore job and career options. . *6.2a*
- b** Compare sources of personal income and compensation *6.2b*
- c** Analyze factors that affect net income. *6.2c*

6.3 Apply reliable information and systematic decision making to personal financial decisions. *6.3*

- a** Recognize the responsibilities associated with personal financial decisions. *6.3a*
- b** Use reliable resources when making financial decisions. *6.3b*
- c** Make criterion-based financial decisions by systematically considering alternatives and consequences. *6.3c*
- d** Control personal information. *6.3d*
- e** Use a personal financial plan. *6.3e*

6.4 Perform spreadsheet applications. *6.4*

- a** Explore spreadsheet software purpose and functions. *6.4a*
- b** Identify terminology and key features including navigation related to spreadsheets. *6.4b*
- c** Use basic spreadsheet formulas, functions, format and edit commands (sort, filter, edit, format, insert, delete, etc.). *6.4c*
- d** Create and manipulate a spreadsheet in meaningful situations. *6.4d*

6.5 Develop and interpret spreadsheet tables, charts, and figures to support written and oral communication. *6.5*

a Create spreadsheet tables, charts, and figures to support (data) written and oral communication. *6.5a*

b Interpret spreadsheet tables, charts, and figures used to support (data) written and oral communication *6.5b*

6.6 Investigate career opportunities in the Finance career cluster. *6.6*

a Research career opportunities for employment in Finance career cluster by exploring the Finance career cluster. *6.6a*

b Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the Finance career cluster. *6.6b*

c Discuss how computer science impacts the Finance career cluster *6.6c*

Unit 7 Graphic Design and Multimedia Presentations 7

7.1 Recognize the purposes of graphic design applications. 7.1

- a Identify terminology used with graphic design applications. 7.1a
- b Differentiate types of graphic design projects and their purposes. 7.1b
- c Identify different types of graphic design software. 7.1c
- d Identify the basic components of a graphic design application screen. e. Identify legal issues related to graphic design. 7.1d
- e Identify legal issues related to graphic design. 7.1e

7.2 Demonstrate the proper use of graphic design applications. 7.2

- a Differentiate rules of design concepts, such as the rules of thirds. 7.2a
- b Generate and manipulate graphics in common graphic design applications. 7.2b
- c Create design elements for physical products, such as a business card, letterhead, brochure, magazine cover, and so forth. 7.2c

7.3 Demonstrate basic multimedia presentation applications 7.3

- a Demonstrate basic multimedia presentation applications 7.3a
- b Define terminology associated with multimedia presentations. Demonstrate basic features of multimedia presentation software. 7.3b
- c Investigate the different types of available multimedia software. 7.3c
- d Demonstrate basic features of multimedia presentation software. 7.3d

7.4 Create a multimedia presentation. *7.4*

Plan a multimedia presentation using proper guidelines using one of the presentation programs presented in this unit. Present a multimedia presentation to an audience. *7.4a*

Define and identify the equipment needed to present multimedia presentations. *7.4b*

Create a professional-quality multimedia presentation. *7.4c*

Present a multimedia presentation to an audience. *7.4d*

7.5 Investigate career opportunities in the Arts, Audio/Video Technology and Communications career cluster. *7.5*

a Research career opportunities for employment in Arts, Audio/Video Technology and Communications career cluster by exploring the Arts, Audio/Video Technology and Communications career cluster. Discuss how computer science impacts the Arts, Audio/Video Technology and Communications career cluster *7.5a*

b Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the Arts, Audio/Video Technology and Communications career cluster. *7.5b*

c Discuss how computer science impacts the Arts, Audio/Video Technology and Communications career cluster *7.5c*

Unit 8 Problem Solving ⁸

8.1 Investigate the problem-solving process. *8.1*

- a** Communicate and collaborate with classmates in order to solve a problem. *8.1a*
- b** Iteratively improve a solution to a problem *8.1b*
- c** Identify different strategies used to solve a problem, *8.1c*
- d** Identify the four steps of the problem-solving process. *8.1d*
- e** Given a problem, identify individual actions that would fall within each step of the problem solving process. *8.1e*
- f** Identify useful strategies within each step of the problem-solving process. *8.1f*
- g** Apply the problem-solving process to approach a variety of problems. *8.1g*
- h** Assess how to define the problem more precisely. *8.1h*

8.2 Differentiate between computer components and processes. *8.2*

- a** Identify a computer as a machine that processes information. *8.2a*
- b** Provide a high-level description of the different parts of the Input - Output - Store – Process model of a computer. *8.2b*
- c** Identify the inputs and outputs of common computing devices. *8.2c*
- d** Select the inputs and outputs used to perform common computing tasks. *8.2d*
- e** Develop, articulate, and implement a method for processing information based on given constraints. *8.2e*
- f** Evaluate the effectiveness of multiple methods for solving an information processing problem. *8.2f*
- g** Provide examples of common types of information that is stored on a computer. *8.2g*
- h** Explain the need for storage as part of processing information with a computer. *8.2h*
- i** Develop an algorithm that incorporates storage considerations. *8.2i*

8.3 Evaluate, analyze, and collaborate to design a web app. *8.3*

- a** Evaluate the information an app would need to be provided as input in order to produce a given output. *8.3a*
- b** Identify and define a problem that could be solved using computing. *8.3b*
- c** Design a prototype of an app (on paper) that inputs, outputs, stores, and processes information in order to solve a problem. *8.3c*
- d** Provide and incorporate targeted peer feedback to improve a computing artifact. *8.3d*

8.4 Investigate career opportunities in the STEM career cluster. DOK 3 a. b. c. *8.4*

- a** Research career opportunities for employment in STEM career cluster by exploring the STEM career cluster. *8.4a*
- b** Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the STEM career cluster. *8.4b*
- c** Discuss how computer science impacts the STEM career cluster (data scientist or other scientist, cybersecurity, engineer, computer hardware or software engineer). *8.4c*

Unit 9 Web Development ⁹

9.1 Identify the purpose of a website. ^{9.1}

- a Identify the reasons someone might visit a given website. ^{9.1a}
- b Identify the reasons someone might create a given website. ^{9.1b}
- c Identify websites as a form of personal expression. ^{9.1c}

9.2 Examine the use of HTML and common tags. ^{9.2}

- a Explain that HTML allows a programmer to communicate the way content should be structured on a web page ^{9.2a}
- b Write a simple HTML document that uses opening and closing tags to structure content. ^{9.2b}
- c Use heading tags to change the appearance of text on a web page. ^{9.2c}
- d Structure content into headings, subheadings, and paragraphs. ^{9.2d}

e Use the

,

, and

1. tags to create ordered and unordered lists in an HTML page.

^{9.2e}

f Describe why using whitespace, indentation, and comments makes your code easier to maintain. ^{9.2f}

9.3 Describe Digital Footprint and how it is created. *9.3*

- a** Understand why and explain reasons that it is difficult to control who sees information published online. *9.3a*

9.4 Identify and use Intellectual Property and Images appropriately. *9.4*

- a** Explain the purpose of copyright. *9.4a*
- b** Identify the rights and restrictions granted by various Creative Commons licenses. *9.4b*
- c** Add an image to a web page. *9.4c*

9.5 Investigate Sources and Search Engines. *9.5*

- a** Use basic web searching techniques to find relevant information online. *9.5a*

9.6 Demonstrate the use of CSS within an HTML document. *9.6*

- a** Use CSS selectors to style HTML text elements. *9.6a*
- b** Create and link to an external style sheet. *9.6b*
- c** Explain the differences between HTML and CSS in both use and syntax. *9.6c*
- d** Use CSS properties to change the size, position, and borders of elements. *9.6d*
- e** Create a CSS rule-set for the body element that impacts all elements on the page. *9.6e*
- f** Group elements using classes in order to create more specific styles on their website. *9.6f*
- g** Apply the RGB color function to add custom colors to their website *9.6g*

9.7 Investigate career opportunities in the STEM cluster. *9.7*

- a** Research career opportunities for employment in STEM (programmer, web developer, networking) by exploring the STEM career cluster. *9.7a*
- b** Examine the requirements, skills, wages, education, and employment opportunities in at least one career pathway from the STEM (programmer, web developer, networking) career cluster. *9.7b*
- c** Discuss how computer science impacts the STEM (programmer, web developer, networking) career cluster. *9.7c*

Unit 10 Introduction to Block-based Programming 10

10.1 Investigate how programming is used to solve problems. 10.1

- a Identify how Computer Science/coding is used in a variety of fields to solve problems. 10.1a

10.2 Investigate the use of objects/sprites in gaming and animation. 10.2

- a Demonstrate understanding of coding tool by labeling areas of screen (i.e. toolbox, workspace, preview stage, sprite list). 10.2a
- b Describe the type of commands found in the toolbox categories (i.e. motion, looks, sound, events, control, sensing, etc.). 10.2b
- c Create a static scene with at least 1 sprite. 10.2c

10.3 Investigate the use of Looks and Sounds commands. 10.3

- a Create an animation with 2 sprites/objects that speak and change costumes. 10.3a
- b Demonstrate proper use of the Show and Hide blocks. 10.3b

10.4 Demonstrate the use of movement in gaming and animation. 10.4

- a Use a movement command to increment or decrement sprite positioning. 10.4a
- b Explain the best use of at least 3 types of movement blocks. 10.4b
- c Use the rotation blocks to create and change sprite movements. 10.4c
- d Demonstrate how to set objects/sprites back to original starting positions. 10.4d

