



## FOUNDATION SKILLS

**PATHWAY:** All Pathways  
**COURSE:** All CTAE Courses  
**UNIT:** Information Technology



## INTRODUCTION

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**Annotation:** Briefly describe the unit topics, tasks, methods, etc.

In this unit, students will learn about the history of information technology and how we use technology today to access, organize, process, transmit, and communicate information.

**Grade(s):**

|   |                  |
|---|------------------|
| X | 9 <sup>th</sup>  |
| X | 10 <sup>th</sup> |
| X | 11 <sup>th</sup> |
| X | 12 <sup>th</sup> |

**Time:** Four 50 minute periods.

**Author:** Kayla Calhoun and Frank Flanders

**Additional Author(s):**

**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



## FOCUS STANDARDS

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**GPS Focus Standards:** Please list the standard and elements covered.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

**GPS Academic Standards:**

**National / Local Standards / Industry / ISTE:**

ESS04 Information Technology Applications: Use information technology tools specific to the career cluster to access, manage, integrate, and create information.



## UNDERSTANDINGS & GOALS

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**Enduring Understandings:** Enduring understandings are statements summarizing important ideas and have lasting value beyond the classroom. They synthesize what students should understand – not just know.

Students will understand that technology changes over time, and information technology specialists should be prepared to constantly learn new methods of data management.

**Essential Questions:** Essential questions probe for deeper meaning and understanding while fostering the development of critical thinking and problem-solving skills. Example: *Why is life-long learning important in the modern workplace?*

- *What historical events contributed to the modern information technology industry?*
- *How is technology used today to manage information?*
- *How can technology be used in career pathways?*

**Knowledge from this Unit:** Factual information.

Students will:

- discuss the development of information technology.
- compare forms of technology used today to those used in the past.
- explain the six functions of data management.
- compare types of networks.

- list careers in information technology, and discuss skill requirements for each.

**Skills from this Unit:** Performance.

Students will learn to use different forms of information technology.



## ASSESSMENT(S)

**Assessment Method Type:** Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

- Pre-test
- Objective assessment - multiple-choice, true- false, etc.
  - Quizzes/Tests
  - Unit test
- Group project
- Individual project
- Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - Self-check rubrics
  - Self-check during writing/planning process
  - Journal reflections on concepts, personal experiences and impact on one's life
  - Reflect on evaluations of work from teachers, business partners, and competition judges
  - Academic prompts
  - Practice quizzes/tests
- Subjective assessment/Informal observations
  - Essay tests
  - Observe students working with partners
  - Observe students role playing
- Peer-assessment
  - Peer editing & commentary of products/projects/presentations using rubrics
  - Peer editing and/or critiquing
- Dialogue and Discussion
  - Student/teacher conferences
  - Partner and small group discussions
  - Whole group discussions
  - Interaction with/feedback from community members/speakers and business partners
- Constructed Responses
  - Chart good reading/writing/listening/speaking habits
  - Application of skills to real-life situations/scenarios
- Post-test

**Assessment(s) Title:** Information Technology Exam

**Assessment(s) Description/Directions:**

Evaluate students' knowledge by administering the attached exam.

**Attachments for Assessment(s):** Please list.

Information Technology Exam



# LEARNING EXPERIENCES

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**Instructional planning:** Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

## Sequence of Instruction

1. Identify the Standards. Standards should be posted in the classroom for each lesson.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

2. Review Essential Questions.

- What historical events contributed to the modern information technology industry?
- How is technology used today to manage information?
- How can technology be used in career pathways?

3. Identify and review the unit vocabulary.

Central Processing Unit

Client-server Network

Data Conversion

Data Processing

Data Storage

Data Transmission

Graphical User Interface

Information technology

IP Address

Local Area Network

Peer-to-peer Network

Server

Wide Area Network

**4. Day 1: History of Information Technology**

Lead class discussion on the history of information technology.

*What are the different ways we sent and received information in the past?*

**5. Show History of Information Technology PowerPoint and discuss.**

**6. Day 2: Information Technology Basics**

Lead class discussion on how information technology is used today.

*What is the new definition of information technology?*

*What jobs are available in the field of information technology?*

**7. Show Information Technology Basics PowerPoint and discuss.**

**8. Day 3: Assign the performance task on using technology for informational purposes.**

**9. Day 4: Unit Test**

**Attachments for Learning Experiences:** Please list.

History of Information Technology PowerPoint

Information Technology PowerPoint

Information Technology Exam

**Notes & Reflections:** May include notes to the teacher, pre-requisite knowledge & skills, suggestions, etc.

- Assist students in selection and use of information technology that is within their skill ability and is most appropriate for the pathway. These might include:
  - Video
  - PowerPoint
  - Brochure/Instruction Manual
  - Animation/Flash
  - Website



# CULMINATING PERFORMANCE TASK (Optional)

**Culminating Unit Performance Task Title:** Using Technology for Informational Purposes

**Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

The student will prepare an instructional manual for a task in the pathway. The student will use technology to research the task as necessary and to present the instructional manual.

1. Select a task. Examples: Health Care – how to make a bed; Agriscience – how to test pH of a soil; Business – how to load software; etc.
2. Prepare detailed instructions on how to perform the task.

Use technology to communicate steps in performing the task. Examples: videos, multimedia (PowerPoint), animation (Flash), website, publisher-type software to produce a user manual or brochure.

**Attachments for Culminating Performance Task:** Please list.

| Criteria                         | Superior | Excellent | Good | Fair | Poor |
|----------------------------------|----------|-----------|------|------|------|
| Accuracy of Information          | 5        | 4         | 3    | 2    | 1    |
| Appropriate Difficulty Level     | 5        | 4         | 3    | 2    | 1    |
| Appropriate Use of Technology    | 5        | 4         | 3    | 2    | 1    |
| Appropriate Technology Selection | 5        | 4         | 3    | 2    | 1    |
| Overall Effort                   | 5        | 4         | 3    | 2    | 1    |



# UNIT RESOURCES

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## Web Resources:

**Attachment(s):** Supplemental files not listed in assessment, learning experiences, and performance task.

## Materials & Equipment:

### What 21st Century Technology was used in this unit:

|                                     |                         |
|-------------------------------------|-------------------------|
| <input checked="" type="checkbox"/> | Slide Show Software     |
| <input type="checkbox"/>            | Interactive Whiteboard  |
| <input type="checkbox"/>            | Student Response System |
| <input checked="" type="checkbox"/> | Web Design Software     |
| <input checked="" type="checkbox"/> | Animation Software      |
| <input type="checkbox"/>            | Email                   |

|                                     |                    |
|-------------------------------------|--------------------|
| <input type="checkbox"/>            | Graphing Software  |
| <input type="checkbox"/>            | Calculator         |
| <input checked="" type="checkbox"/> | Desktop Publishing |
| <input type="checkbox"/>            | Blog               |
| <input type="checkbox"/>            | Wiki               |
| <input checked="" type="checkbox"/> | Website            |

|                                     |                                 |
|-------------------------------------|---------------------------------|
| <input checked="" type="checkbox"/> | Audio File(s)                   |
| <input checked="" type="checkbox"/> | Graphic Organizer               |
| <input checked="" type="checkbox"/> | Image File(s)                   |
| <input checked="" type="checkbox"/> | Video                           |
| <input checked="" type="checkbox"/> | Electronic Game or Puzzle Maker |