Unit 0: Computer Systems

Content Area: **Business**
Course(s): **Generic Course**
Time Period: **Semester 1 & 2**
Length: **2 weeks**
Status: **Published**

Standards

TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.CS1	Understand and use technology systems.
TECH.8.2.12.E.2	Analyze the relationships between internal and external computer components.
TECH.8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games).

Enduring Understanding

Computer systems have evolved and become an intrinsic part of everyday life, both personal and in the workplace.

Hardware and software work together to accomplish complex tasks.

The basic purpose of a Java program is to store data and manipulate that data.

Essential Questions

How have computer systems evolved over time?

How does hardware and software work together?

How is data represented internal to the computer?

Knowledge and Skills

- Describe the relationship between hardware and software
- Define various types of software and how they are used
- Identify basic computer hardware and explain what it does
- Explain how the hardware components execute programs and manage data
- Describe how computers are connected together into networks to share information

- Explain the importance of the Internet and the World Wide Web
- Convert base 10 numbers to base 2 and base 16.
- Convert base 2 and base 16 numbers to decimal

Transfer Goals

Students will be able to explain how computer systems work together to accomplish complex tasks.

Deconstructing a problem into components allows you to tackle complicated tasks.

Resources

Teacher created Computer Science Google site

Google Jamboard for demonstrating and practicing base conversions

CSAwesome

CodingBat