8 Computer Science Unit 01: Intro to Computer Science

Content Area: **Technology**
Course(s):
Time Period: **Marking Period 1**
Length: **3 Weeks**
Status: **Published**

Unit Overview

- Introduction to CS - how CS affects our lives daily
- Digital Citizenship
- Internet/Networks
- Cyber Security

Standards

8.1.8.CS.1	Recommend improvements to computing devices in order to improve the ways users interact with the devices.
8.1.8.NI.1	Model how information is broken down into smaller pieces, transmitted as addressed packets through multiple devices over networks and the Internet, and reassembled at the destination.
8.1.8.NI.2	Model the role of protocols in transmitting data across networks and the Internet and how they enable secure and errorless communication.
8.1.8.NI.3	Explain how network security depends on a combination of hardware, software, and practices that control access to data and systems.
8.1.8.NI.4	Explain how new security measures have been created in response to key malware events.
8.1.8.IC.1	Compare the trade-offs associated with computing technologies that affect individual's everyday activities and career options.
8.1.8.DA.1	Organize and transform data collected using computational tools to make it usable for a specific purpose.
8.1.8.DA.2	Explain the difference between how the computer stores data as bits and how the data is displayed.
8.2.8.ITH.1	Explain how the development and use of technology influences economic, political, social, and cultural issues.
8.2.8.ETW.1	Illustrate how a product is upcycled into a new product and analyze the short- and long-term benefits and costs.
8.2.8.EC.1	Explain ethical issues that may arise from the use of new technologies.

Materials

- Chromebook

- Brainpop

Assessment

Formative Assessment

- Teacher Observation
- Checks for Understanding
- Exit Tickets

Summative Assessment

- Performance Tasks & Projects

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples…
- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

504

- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

ELL

- Translation device/dictionary
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

At-risk of Failure

- Preferred seating

- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

Gifted & Talented

- Independent projects
- Online games
- Extension activities

Interdisciplinary Connections

21st Century Life Literacies & Key Skills

9.4.8.CI.2	Repurpose an existing resource in an innovative way (e.g., 8.2.8.NT.3).
9.4.8.DC.1	Analyze the resource citations in online materials for proper use.
9.4.8.DC.2	Provide appropriate citation and attribution elements when creating media products (e.g., W.6.8).
9.4.8.DC.3	Describe tradeoffs between allowing information to be public (e.g., within online games) versus keeping information private and secure.
9.4.8.DC.4	Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.
9.4.8.DC.6	Analyze online information to distinguish whether it is helpful or harmful to reputation.