Unit 2 - Responsible Digital Citizenship

Content Area: **Computer Science**
Course(s):
Time Period: **Marking Period 1**
Length: **4 weeks**
Status: **Published**

Brief Summary of Unit

This unit focuses on the human-computer interaction that forms the basis of the Internet experience. General concepts include the idea of a "digital footprint," cyberbullying, Internet safety, information literacy, creative credit & copyright, hacking ethics and legality.

Revised November 2023

Standards

- TECH.8.1.12.B.CS2
- TECH.8.1.12.C.CS1
- TECH.8.1.12.C.CS4
- TECH.8.1.12.D.2
- TECH.8.1.12.D.4
- TECH.8.1.12.D.CS1
- TECH.8.1.12.D.CS3
- TECH.8.1.12.E.2
- TECH.8.1.12.E.CS2
- TECH.8.1.12.E.CS3
- TECH.8.1.12.F.CS2
- TECH.8.2.12.E.1
- TECH.8.2.12.E.4

CS.9-12.CS	Computing Systems
CS.9-12.ED	Engineering Design
CS.9-12.IC	Impacts of Computing
CS.9-12.NT	Nature of Technology
CS.9-12.ETW	Effects of Technology on the Natural World
CS.9-12.ITH	Interaction of Technology and Humans
LA.K-12.NJSLSA.L4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and

	specialized reference materials, as appropriate.
LA.K-12.NJSLSA.L5	Demonstrate understanding of word relationships and nuances in word meanings.
	Complex programs are designed as systems of interacting modules, each with a specific role, coordinating for a common overall purpose. Modules allow for better management of complex tasks.
	Complex programs are developed, tested, and analyzed by teams drawing on the members' diverse strengths using a variety of resources, libraries, and tools.
	Individuals evaluate and select algorithms based on performance, reusability, and ease of implementation.
	Trade-offs related to implementation, readability, and program performance are considered when selecting and combining control structures.
	Programmers choose data structures to manage program complexity based on functionality, storage, and performance trade-offs.

Transfer

- Students will learn about being safe online, the effects of their interaction with the internet, legally acceptable Internet behavior, and the ways in which they can use others' digital work. These skills will allow students to maximize the beneficial effects of the Internet in their personal and academic endeavors.

Essential Questions

- How can hacking be both beneficial and harmful?
- How can you help to prevent/stop cyber bullying?
- What are some examples of what is meant by the phrase "digital footprint," and what are the personal ramifications of a positive/negative digital footprint?
- What are some of the hallmarks of a "credible" online source?
- What are the various kinds of copyright that govern the usage of digital works?
- What information could help malevolent Internet users find people? What personal information should be kept private?

Essential Understandings

- Any time one uses another's work, proper citation must be provided
- Cyber bullying can sometimes have a persisting and more poignant effect on the target than bullying in person
- Hacking does not only describe illegal tampering with a network
- Hacking is permissible in certain circumstances, such as with one's own devices (if allowed by the provider), or with the permission of a company seeking to test its security measures
- It is important to be able to determine the credibility of an online source, whether it is for a school project, or your own personal information. Does the source look professional? Who is the author? Is that source referenced in other sources? Does the author have a discernable personal motive? Is the source recent and/or was it recently updated

- One's digital footprint is comprised of various data that one leaves behind as they interact with the Internet
- One's intent when hacking has no bearing on the legality of the hacking. Know the law, and what is permissible
- The kind of copyright that the work has specifies the ways (if any) in which others may use it
- The nature of one's digital footprint can affect how colleges, future employers, and new friends view oneself
- There are several ways that one can help to prevent cyberbullying

Students Will Know

- A Creative Commons license permits the use and alteration of digital works, sometimes with certain restrictions
- Characteristics of a credible source
- Circumstances under which hacking is permissible
- Pictures, posts, and presence on social media are examples of what is meant by one's digital footprint
- Using privacy settings can help to limit who sees your information, but they are not perfect

Students Will Be Skilled At

- Examining the available privacy settings on social media sites, and using them to specify who can see personal information
- Examining their digital footprint, and taking steps to ensure it is positive
- Hacking legally
- Identifying a credible source
- Using digital sources appropriately

Evidence/Performance Tasks

Assessments

- Formative: Daily assessments using examples from class notes and CodeHS.com, AP Classroom/Albert Checks for Understanding
- Summative: Teacher-created assessments/projects and CodeHS Computer Science Projects, AP Classroom/Albert Unit Assessments
- Benchmark: Check for understanding benchmark assessments on CodeHS, AP Classroom/Albert/Khan Academy Diagnostics
- Alternative Assessments: Student-centered activities such as a doorbell coding project, game design projects, and other activities involving real world applications

- Answer essential questions
- Class discussion of daily topic
- Classwork and homework that assess the essential questions
- Provide alternative means of assessments for certain students
- Public Service Announcement on a unit topic of the student's choosing
- Teacher Observation
- Tests and quizzes that assess the essential questions
- Written assignments that assess the essential questions that involves providing explanations

Learning Plan

- Creative Credit & Copyright
- Cyberbullying
- Digital Footprint
- Information Literacy
- Internet Safety
- Possible guest speakers on cyber bullying and/or Internet safety
- The Ethics of Hacking and its Legality

Materials

- Core instructional materials: Core Book List

  Supplemental materials: CodeHS

- Computers
- Creative materials for the making of a public service announcement
- Teacher created activiites
- Teacher created notes
- Website such as codehs.com for content
- Websites to research current events

Suggested Strategies for Modifications

Possible accommodations/modification for Introduction to Cybersecurity