Unit 6: Current Trends in Technology

Content Area: **Computer Science**
Course(s):
Time Period: **Marking Period 1**
Length: **3-4 Weeks**
Status: **Published**

Summary

Society both influences and is transformed by technological advancement. Students will research the cause and effect of emerging technologies. Debates and discussions will be set up to discuss current policies and laws affecting computer use, technology and the Internet.

Revised Date: July 2025

P.1	Act as a responsible and contributing community members and employee.
P.4	Demonstrate creativity and innovation.
P.5	Utilize critical thinking to make sense of problems and persevere in solving them.
P.6	Model integrity, ethical leadership and effective management.
P.8	Use technology to enhance productivity increase collaboration and communicate effectively.
L.VL.11–12.3	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, including technical meanings, choosing flexibly from a range of strategies.
L.VI.11–12.4	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings, including connotative meanings.
8.1.12.IC.1	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.
8.1.12.IC.3	Predict the potential impacts and implications of emerging technologies on larger social, economic, and political structures, using evidence from credible sources.
9.4.12.DC.6	Select information to post online that positively impacts personal image and future college and career opportunities.
W.AW.11–12.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
9.4.12.TL	Technology Literacy

Essential Questions / Enduring Understandings

Essential Questions:

- How are current technologies changing society?
- What technologies have emerged recently?

- What laws are in place to protect programmers and inventors?
- Can technologies be used for any other purpose besides their original intended purpose?
- What laws are in place to protect viewers and consumers?
- What is copyright law?
- What constitutes "fair use"?
- What is intellectual property?
- How are new technologies and programs protected?
- How do these laws apply to the Internet?
- How are laws different in other countries (pertaining to the Internet)?

Enduring Understanding:

- There are unintended consequences to emerging technologies, some positive and some negative.
- Government control of the internet internationally has changed and continues to change.
- Laws protect the developers of original code and products.
- Being aware of current laws will help protect the programmers in the future.

Objectives

Students will know:

- about copyright laws
- about intellectual property
- about emerging technologies

Students will be skilled at:

- researching most current laws concerning computer program developers
- using content in accordance to the law
- using research based evidence to support arguments/discussions

Learning Plan

- Preview the essential questions and connect to learning throughout the unit.
- Research on social, ethical, and legal issues pertaining to computer use.
- Discussion of the responsible use of a system.
- Discussion of current technologies.
- Discussion of current laws pertaining to the internet and technology.
- Debate on existence of local and international law pertaining to the internet, computer use and technology as it pertains to the new technologies.

Assessment

- 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
        - Complete quizzes/test: Algorithms, Structure of Programs, Design of Programs
        - Be observed by the teacher during individual work on the performance tasks.
        - Conduct self-assessments and reflections
        - Conduct Peer Evaluations.

Materials

- Core instructional materials: Core Book List
- Supplemental materials: CodeHS, computers, and reference books.

Integrated Accommodations and Modifications

See Linked Document.