Unit 6: Current Trends in Technology

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

Standards

Society changes with technology as well as because of it. 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.

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LA.RH.11-12.9	Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
LA.RST.11-12.1	Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
LA.WHST.11-12.1	Write arguments focused on discipline-specific content.
	Research to Build and Present Knowledge
LA.WHST.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
LA.WHST.11-12.9	Draw evidence from informational texts to support analysis, reflection, and research.
CS.9-12.8.1.12.IC.1	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.
CS.9-12.8.1.12.IC.3	Predict the potential impacts and implications of emerging technologies on larger social, economic, and political structures, using evidence from credible sources.
CS.9-12.8.2.12.ITH.1	Analyze a product to determine the impact that economic, political, social, and/or cultural factors have had on its design, including its design constraints.
CAEP.9.2.12.C.7	Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
TECH.8.1.12.D.5	Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
TECH.8.2.12.B.1	Research and analyze the impact of the design constraints (specifications and limits) for a product or technology driven by a cultural, social, economic or political need and publish for review.
TECH.8.2.12.B.CS1	The cultural, social, economic and political effects of technology.

Essential Questions / Enduring Understanding

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 origianl inteded purpose?
- What laws are in place to protect viewers and consumers?
- What is copyright law?
- What constitues "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 technolgies, 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 technolgies.

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 the performance task of develping a presentation on the emerging technology and its effect on society.
- Teacher observation of students doing wotk on the performance tasks.
- Class participation on discussions and debates.

Materials

- Core instructional materials: [Core Book List](#)

  Supplemental materials: CodeHS

- Computer
- Reference books

Integrated Accommodations and Modifications

See [Linked Document](#).