Unit 4: Using Informed Decisions to Create Modern Websites

Content Area: **Computer Science**
Course(s):
Time Period: **Marking Period 3**
Length: **30-35 days**
Status: **Published**

Brief Summary of Unit

The unit will emphasize that successful web design involves more than creating an attractive website. Professional web designers must balance visual design with usability, accessibility, performance, content strategy, technical requirements, client goals, and the needs of diverse users. By the end of the unit, students will create and present a polished web project that demonstrates current design practices, thoughtful decision-making, effective collaboration, and the ability to evaluate and improve a website using professional standards.

Revised August 2026

1	Make sense of problems and persevere in solving them
3	Valuing Evidence in Argumentation: Constructing viable claims and evaluating, defending, challenging, and qualifying the arguments of others.
2	Reason abstractly and quantitatively
5	Leveraging Technology: Employing technology and digital media thoughtfully, strategically and capably to enhance reading, writing, speaking, listening, and language use.
P.7	Plan education and career paths aligned to personal goals.
P.8	Use technology to enhance productivity increase collaboration and communicate effectively.
5	Use appropriate tools strategically
P.9	Work productively in teams while using cultural/global competence.
S.MD.A	Calculate expected values and use them to solve problems
S.MD.B	Use probability to evaluate outcomes of decisions
1.2.12prof.Cn10b	Explain and demonstrate the use of media artworks to expand meaning and knowledge, and create cultural experiences such as learning and sharing through online environments.
EC	Ethics & Culture
8.2.12.EC.1	Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made.
8.2.12.EC.2	Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.
8.2.12.EC.3	Synthesize data, analyze trends, and draw conclusions regarding the effect of a technology on the individual, culture, society, and environment and share this information with the appropriate audience.
8.2.12.ETW.4	Research historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product and present the competing viewpoints.

Essential Questions / Enduring Understandings

Essential Questions:

- How do web designers balance visual appeal, usability, accessibility, performance, and client goals?
- How do a website's purpose, audience, and content influence its design and organization?
- How do responsive and mobile-first design practices improve the user experience?
- How do collaboration, communication, and project management contribute to the success of a web design team?
- How do web designers determine whether a current design trend improves a website or simply changes its appearance?

Enduring Understandings:

- Effective web design is purposeful and user-centered.
- Good web design requires a balance between aesthetics and functionality.
- Websites must provide consistent and effective experiences across devices and browsers.
- Accessibility and inclusive design are essential components of quality web design.
- Professional web design is an iterative process.

Objectives

Students Will Know:

- The principles of effective, user-centered web design, including usability, visual hierarchy, navigation, content organization, and audience awareness.
- Current web design practices and technologies.
- The relationship between design decisions and website effectiveness.
- The professional and ethical responsibilities of web designers.

Students Will be Skilled at:

- Analyzing a website's purpose, audience, content, and goals
- Designing and developing responsive, accessible, and visually effective web pages
- Evaluating current web design trends and emerging tools
- Testing and improving websites

Learning Plan

- Discussion of key programs and technologies utilized on the CHS website
- Discussion on how to be aware of updates
- Students will conduct online research on current trends in web design. Research may focus on any of the following topics:

    - information architecture
    - responsive design and modern layout systems
    - cross browser and cross device testing; progressive enhancement
    - performance optimization
    - content management systems and visual site builders

- Students will bring back to the webmaster team any trends that they believe could be incorporated into the high school's website, and the team will discuss, as a whole, the merits of such incorporation.
- Discussion on the overall way of learning about new programs and 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
- Activities/Assessments Folder
- Presentations on current trends
- Incorporation of current trends into the high school's website where applicable and deemed appropriate.

Materials

Core instructional materials: Core Book List

Supplemental materials: CodeHS, GitHub

- The Internet
- CMS Systems

Integrated Accommodation and Modifications

Web Team Accommodation and Modifications