Unit 2: Create a Website

Content Area: **Computer Science**
Course(s):
Time Period: **Trimester 1**
Length: **25 weeks**
Status: **Published**

BRIEF SUMMARY OF UNIT

Students will work individually or with a partner to research a topic of interest and create a website that contains their research information. Students will use their knowledge of HTML, CSS, and JavaScript from Unit 1 for this project.

STANDARDS

Diversity and Inclusion: Students will focus on equity, inclusion, and tolerance when analyzing the comparison of various quantities regarding characteristics of people. Equality will also be highlighted through the topic of citizenship. This can be associated with treating people fairly and equally.

- • 8.1.8.CS.3: Justify design decisions and explain potential system trade-offs.
- • 8.1.8.CS.4: Systematically apply troubleshooting strategies to identify and resolve hardware and software problems in computing systems.
- • 9.4.8.DC.2: Provide appropriate citation and attribution elements when creating media products (e.g., W.6.8).
- • 9.4.8.TL.3: Select appropriate tools to organize and present information digitally.

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.
SOC.6.3	Active Citizenship in the 21st Century
SCI.MS-ETS1-1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
SCI.MS-ETS1-3	Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
WRK.K-12.P.5	Utilize critical thinking to make sense of problems and persevere in solving them.
WRK.K-12.P.8	Use technology to enhance productivity increase collaboration and communicate effectively.
TECH.9.4.8.CI.3	Examine challenges that may exist in the adoption of new ideas (e.g., 2.1.8.SSH, 6.1.8.CivicsPD.2).
TECH.9.4.8.CI.4	Explore the role of creativity and innovation in career pathways and industries.
TECH.9.4.8.DC.1	Analyze the resource citations in online materials for proper use.
TECH.9.4.8.TL.5	Compare the process and effectiveness of synchronous collaboration and asynchronous

collaboration.

Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.

Multiple solutions often exist to solve a problem.

TRANSFER

- • Create websites for personal use or school projects.
- • Use their website as a digital portfolio to feature their work and achievements.
- • Extend this basic learning of website design and construction to more advanced learning of website development.
- • Gain awareness of website development as a career.
- • Self-directed learning, resourcefulness, problem solving, and collaboration.
- • Use HTML/CSS knowledge and skills as a path to learning other programming languages.

ESSENTIAL QUESTIONS

- • What are the building blocks of effective web page design?
- • What are the various responsibilities of a webmaster?
- • What constitutes a “good” web site?

ESSENTIAL UNDERSTANDINGS

- • A web designer needs to understand the use of HTML, CSS and scripting languages with the ability to recognize and correct errors.
- • Becoming a Website Designer is a possible career choice.
- • Mastering the use of software programs is necessary to create web pages.
- • There are Web Builder sites found on the internet, e.g., Wix.com and Weebly.com
- • Web design is learning the essential skills to create web pages for the Internet.
- • Websites can be constructed by using a text editor, markup languages like HTML, and scripting languages like javascript.

STUDENTS WILL KNOW

- • How to Evaluate the design of a website.
- • How to use the Internet as a source of information to research a topic of interest and locate images, videos, and audio files.
- •How to design with code an attractive, easy to navigate website.
- •How to divide a Website topic into multiple webpage topics.

STUDENTS WILL BE SKILLED AT

- • Adding interactive buttons to their webpages using JavaScript.
- • Coding a navigation bar that allows the user to move from page to page within their website.
- • Inserting division codes to create sections in their webpages.
- • Using basic HTML, CSS, and JavaScript coding languages.

EVIDENCE/PERFORMANCE TASKS

Assessments

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

Core instructional materials: Core Book List

Supplemental materials: Khan Academy

- •Final Topic/Partner Website Project.
- •Quiz/assignment on website evalutation.

LEARNING PLAN

- •Instruction of coding webpage sections, JavaScript button, and navigation bar is given.
- •Outline of Website Project approved.
- •Overview of final project - Requirements, Grading Rubric, Deadlines are given.
- •Parts of websites are checked at deadlines.
- •Students code websites, teacher circulates labs and assists when needed.
- •Students critique their classmates' websites.
- •Students present their final website projects.

- •Website topic and subtopics approved.

MATERIALS

Core instructional materials: Core Book List

Supplemental materials: CodeHS

https://codehs.com/

https://codehs.com/uploads/982b092ca257d83d0eb2b8d107de803f

https://www.khanacademy.org/computing/computer-programming

- •How to cite a Website - https://www.scribbr.com/mla/website-citation/
- •How to cite an image - https://www.scribbr.com/mla/image-citation/
- •HTML/CSS tutorials - https://www.khanacademy.org/, https://codehs.com/, W3schools.com
- •https://www.easybib.com/guides/citation-guides/citation-basics/how-to-tell-if-website-is-credible/

SUGGESTED STRATEGIES FOR MODIFICATIONS

Possible accommodations/modification for Computers - Grade 7