# Unit 1: What is the Web?

Content Area: **Computer Science**
Course(s):
Time Period: **Marking Period 1**
Length: **8 Days**
Status: **Published**

## Summary

Students will be introduced to the world wide web and the Internet in this unit. The basics of how a website is stored and sent to devices will be discussed, along with a brief overview of the relevant protocols. Browsers, Internet censorship and Internet safety will also be examined.

**Revised Date:** July 2025

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| 1 | Make sense of problems and persevere in solving them |
| L.SS.11–12.1 | Demonstrate command of the system and structure of the English language when writing or speaking. |
| P.3 | Consider the environmental, social and economic impacts of decisions. |
| P.4 | Demonstrate creativity and innovation. |
| L.KL.11–12.2 | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. |
| P.6 | Model integrity, ethical leadership and effective management. |
| P.8 | Use technology to enhance productivity increase collaboration and communicate effectively. |
| 5 | Use appropriate tools strategically |
| | Network security depends on a combination of hardware, software, and practices that protect data while it is at rest, in transit, and in use. The needs of users and the sensitivity of data determine the level of security implemented. Advanced attacks take advantage of common security vulnerabilities. |
| AP | Algorithms & Programming |
| | Engineering design evaluation, a process for determining how well a solution meets requirements, involves systematic comparisons between requirements, specifications, and constraints. |

## Essential Questions/Enduring Understandings

Essential Questions:

- What is the difference between the Internet and the World Wide Web?
- What purpose do protocols serve?
- What are some ways to minimize risk while using the Internet?

Enduring Understandings:

- The Internet is the physical structure that connects devices together, and the World Wide Web is an

application that runs on the Internet. The World Wide Web is an abstraction that refers to the various documents, images, and other data types accessible to those who are connected to the Internet.
- Protocols allow different devices to talk to each other by guaranteeing that information is sent, received, and stored in a uniform manner.
- While the Internet is a valuable tool that allows access to and dissemination of information, it can also serve as an avenue for someone to attack devices. There are simple methods that Internet users can use to help to protect their devices.

## Objectives

Students Will Know:

- the difference between the Internet and the World Wide Web.
- what "HTTP," "HTTPS," and "HTML" stand for.

Students Will be Skilled at:

- taking basic safety precautions while browsing the web.

## Learning Plan

- Lectures on topics listed in summary.
- Current events articles on Internet censorship and Internet safety.
- Students research articles related to the Internet, Internet safety, and/or Internet censorship.

## 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 shown below:

- Alternative Assessments: Student-centered activities such as a doorbell coding project, game design projects, and other activities involving real world applications
    - Students provide written explanations for questions about the Internet, Internet protocols, and/or browsers. This may or may not take the form of a formal quiz.
    - Students present their research.

## Materials

- Core instructional materials: Core Book List
- Supplemental materials:
    - CodeHS (for remediation and differentiation as deemed appropriate)
    - Internet
    - Computers
    - Projection system for lecture