

AP Computer Science Principles

Summer Assignment 2025

Future AP Computer Science Principles Student,

Welcome to AP Computer Science Principles! I am eagerly anticipating a great year of Computer Science Principles! In order to ensure the best start for everyone next year, you will have to complete work this summer.

Computing has transformed our lives in so many ways. And mobile computing, where we are constantly connected to others and to the world via our mobile devices, is challenging us right now to come up with new norms about privacy, security, the ownership or openness of data and information, and other issues. Like any technology, mobile computing has both positive and negative impacts. We need to reflect on these impacts in general and we also think about the impacts we will create as we build our own mobile apps.

One way we will be addressing some of these issues in this course is by completing the Unit on the Internet in code.org. This unit reveals how the Internet was designed to connect billions of devices and people to one another. You will learn how the different protocols of the Internet work as we use it every day. You will then consider the impacts the Internet has had, both good and bad, on modern life.

In order to complete your summer assignment, you must join our code.org classroom (we will be using code.org for the entire year)

1. Join our Google Classroom
 - a. use the following code:
 - b. **knmzoaot**
2. Please go to www.code.org
 - a. WE WILL BE COMPLETING THIS AFTER YOU JOIN GOOGLE CLASSROOM
 - b. Sign in on the top right corner
 - c. Please sign in with Google (Green Button on the Right)
 - d. Only Use your Jefftwp Google Account

On the following pages, you will find an outline of your summer assignments and what is to be completed prior to The Second Day School.

I HIGHLY recommend that you spread out the assignments over the summer. Please do not try to complete it all in the final week of August.

Have a great summer!

Ms. Mannerberg
AMannerberg@jefftwp.org

AP Computer Science Principles

Summer Assignment 2025

You are to complete two assignments listed to complete for your Summer Assignment.

1. The Internet Unit

- a. This Unit will be assigned to you in code.org, but will be modified as the following for asynchronous summer work:
- b. You may also coordinate with classmates over the summer to use the Internet Simulators provided in code.org for a more hands-on approach to your Internet understanding, but it is not required, as videos demonstrating the simulator are provided below.

- **U2L1 Welcome to the Internet**

- Watch [What is the Internet?](#) on Youtube (Stop at 1:30)
- Watch [Internet Simulator](#) video in Google Drive
- Complete the Checking for Understanding for [U2L1](#) in code.org

- **U2L2 Building a Network**

- Complete the challenges on the Google Slides
 - [Building A Network Challenge - Google Slides](#)
 - The challenge is also provided as your own copy in Google Classroom
 - There are challenges to which you will connect letters with lines.
 - The line tool is above the slides between the shape tool and the comment tool.
- Review the information on the [Network Vocabulary Slides](#)
- Complete the Checking for Understanding for [U2L2](#) in code.org

- **U2L3 The Need for Addressing**

- Complete the questions on the Google Slides
 - [Group Chat Slides](#)
 - The slide is also provided as your own copy in Google Classroom
- Watch [U2L3 Activity Challenge Video](#) video in Google Drive
- Complete the Checking for Understanding for [U2L3](#) in code.org
 - There are two checking for understandings to complete

- **U2L4 Routes and Redundancy**

- Watch [U2L4 Demo Video](#) video in Google Drive
- Complete the Checking for Understanding for [U2L4](#) in code.org
 - There are two checking for understandings to complete

- **U2L5 Packets**

- Watch U2L5 Packet Demo Videos
 - [Internet Simulator Walkthrough Pt1 - Packets](#)
 - [Internet Simulator Walkthrough Pt2 - Packets](#)
- Watch [The Internet: Packets, Routing, and Reliability Video](#) on YouTube
- Complete the Checking for Understanding for [U2L5](#) in code.org
 - There are two checking for understandings to complete

- **U2L6 HTTP and DNS**

- Watch [DNS Video](#) on YouTube
- Watch [HTTP Video](#) on YouTube
- Complete the Checking for Understanding for [U2L6](#) in code.org
 - There are two checking for understandings to complete

AP Computer Science Principles

Summer Assignment 2025

2. Project Internet Dilemmas

- a. In this project, you will explore a relevant Internet dilemma:
 - i. Net Neutrality
 - ii. Internet Censorship
 - iii. Digital Divide.
- b. You will apply your knowledge of how the Internet works to address the core question related to their chosen dilemma.
 - i. Each dilemma has a core question provided in the Project Guide below
- c. This project addresses the "so what" question - why is it important to learn about how the Internet works?

You will work through the linked Project guide (also found in Google Classroom)

- i. [Project Guide - Internet Dilemmas](#)
 1. All work will be completed in the Project Guide
 2. Step 1 - Pick Your Dilemma
 - a. Research all three Dilemmas prior to choosing a topic
 - b. The issues provided are topics covered in the AP Exam
 3. Step 2 - Review the One-Pager and Rubric
 - a. One-Pager is on page 3
 - b. Rubric is on page 4
 4. Step 3 - Review the Concept Bank on terms that were covered in Assignment one of the Summer Assignment
 5. Step 4 - Review Your Sources
 - a. Complete the table
 - b. Free resources per dilemma is provided on page one
 - c. You may find other resources.
 6. Step 5 - Complete the One-Pager
 - a. All text in italics is included to explain how to fill in the One-Pager
 - b. Italics may be deleted upon completion of the One-Pager