

To my future AP Computer Science Principles Student,

Welcome to AP CSP! I am anticipating a great year of Computer Science Principles. In order to ensure the best start for everyone next year, I have prepared a summer assignment that reviews some basic pre-CSP concepts.

Before you dive into this assignment why don't you take a look at some reasons to take this class as told by some former students:

- [Jack and Mathilde](#)
- [Lexie and Michelle](#)
- [Kennedy](#)
- [Nathaniel](#)

Information about this course:

AP Computer Science Principles is the equivalent of a first-semester, college-level introductory course in computer science for non-majors. The course introduces students to the field of computer science and explores five Big Ideas: (1) Creative development, (2) Data, (3) Algorithms and programming, (4) Computing systems and networks, and (5) Impact of computing. The course also integrates computational thinking practices, including: (1) Computational solution design, (2) Algorithms, (3) Abstraction in program development, (4) Code analysis, (5) Computing innovations, and (6) Responsible computing. Students practice problem solving by developing algorithms and programs and incorporate abstraction into their programs. Students examine the importance of collaboration and diversity when designing computing innovations. Additionally, students explore the intended and unintended consequences (both beneficial and harmful) of computing innovations and computing systems. Students utilize MakeCode Arcade for the core programming components of the course.

Your Assignment Checklist:

- Watch [this welcome video](#) from Mrs. Russo telling you more about the course and reviewing the class syllabus and expectations.
- Sign up for our APCSP Remind101. I will send out reminders over the summer and through the school year. To join text @russoapcsp to 81010
 - Parents/guardians are also welcome to sign up but the APCSP students MUST sign up.
- Put together a one page infographic modeled after the Explore Performance Task previously required as a portfolio item for this class. The task asks you to investigate a computing innovation and examine its purpose and function and how it accomplishes those tasks. Please see the other assignment links for the Explore Task instructions and grading rubric.
 - Note that while College Board no longer requires the Explore Tasks as a portfolio item, the skills gained during an Explore Task are required. Students must be able to read information about an innovation and make decisions about purpose, function, and effects of that innovation. These are skills that we will practice throughout the year, but it is helpful to get a jump on that now.

- Watch these 2 videos.
 - The first shows you some of the most important concepts in computers. If you have any questions, please let me know. There are lots of other videos if you are interested, but this is the required one: <https://youtu.be/LpuPe81bc2w>.
 - Be sure you understand positional notation, base numbers and alphanumeric characters and URL shorteners when you are done watching. If not watch again or find another video or source.
 - This second video is more for fun – be sure you can count to 31 in Binary by the time we start school, <https://youtu.be/OCYZTg3jahU>.
- Finally, you will learn how to convert between different number bases, including binary, decimal, and hexadecimal. Here is [my video](#) on how to do these conversions. You are welcome to look at other videos or resources to help you practice. You will have a quiz on this by the end of your first week in the class. If you are someone who needs additional time to practice concepts like that, plan accordingly.

It is going to be a great year, and I am looking forward to working with you!

Sincerely,

A handwritten signature in black ink that reads "Sommer Russo". The signature is written in a cursive style with a large, stylized 'S' and 'R'.

Sommer Russo