Summer Assignment for AP Computer Science Principles (AP CSP)

Mr. Harris-White Station High School

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Here is the summer assignment for AP CSP. Please read carefully and complete before **August 9, 2021**. This will allow time for me to go through the assignments and see where we are before we start the course. The summer work is 20+ hours so start early!

The most important part of the summer work is to dig around and play with the ideas of computers and programming. The AP CSP Exam has 3 distinct parts.

The first part of the exam is like any other AP it is a written test made up of 75 Multiple Choice questions in a test during AP week (Week of May 16 or May 23, 2022-We have not been given the exact exam date). This counts for 60% of your AP score. This does not change or relate to your course grade.

The second part of the AP Course/Exam is to create an artifact: a digital portfolio of an App or game that you create. This must include: a video of the artifact (running), answers to questions and pdf of your programming code. This is 24% of your AP score.

The third component is evaluating a computational innovation that exists in the world already. You then have to make a video or infographic of the innovation and answer questions about the innovation and how it is changing society. This is 16% of your AP score.

The second and third portions are submitted directly to The College Board. These will also be graded in class and must be completed to receive credit for the course.

The summer assignments will help with all three facets of the exam.

If you have any questions, please contact me: harristm@scsk12.org. This email will be checked often, but not on a daily basis throughout the summer. Email me early and often with your progress. DO NOT put this off until August 9th!

Assignments:

ALL: 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.

ALL: You need to choose **ONE** of the following assignments (1 or 2). You can do both of course, but only one is required:

Option 1: If you have **NO** computer programming background, start here: Try to do some basic drag and drop block coding. Here are 2 websites: https://blockly-games.appspot.com/?lang=en or

https://scratch.mit.edu/. After getting comfortable with how block coding works, go to Code.org (Approximately 20 hours) and join this section https://studio.code.org/join/WRXXTZ . Begin working on **Accelerated Intro to Computer Science**.

Option 2: If you have **SOME** computer programming background, go to Codeacademy.com (Approximately 15-50+ hours) https://www.codecademy.com/learn/all

1. Pick one from "Courses" section. Preference is Introduction to JavaScript, Ruby or PHP. Send screen shots of completed tasks.
2. Pick any other course. Preference is "Learn Ruby on Rails". Send copy of completed App.

ANYONE: Extra Credit: Create your own website or for those of you that want a challenge, go to the Codeacademy.com and do the Learn Node SQLite lessons.

Good luck – have fun – email with any questions, concerns or cool stuff you find. Enjoy the summer, be kind and I can't wait to see you soon. Mr. Harris

Link to AP Computer Science Principles-College Board Website-
https://apcentral.collegeboard.org/courses/ap-computer-science-principles