

AP Computer Science A - Summer Assignment

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Science Academy STEM Magnet

2021-2022

APCS is a fast-paced course, and there is a lot to learn before the exam in May 2021. The purpose of this summer assignment is to prepare you for the challenges in APCS so we can hit the ground running in the fall. Don't worry if you feel like you don't know how to program or you're "rusty". In APCS you will learn how to code using Java.

Please read and complete all steps of this assignment. It is due on the first day of class.

1. Read Chapter 1: "The Way of the Program" in the free online textbook Think Java: How to Think Like a Computer Scientist, by Allen B. Downey and Chris Mayfield. You can download the book or read it online at <http://thinkjava.org/>
2. Watch the documentary "The Secret Rules of Modern Living Algorithms" on YouTube: <https://www.youtube.com/watch?v=kiFfp-HAu64>
3. Complete the assignment questions below.

Over the summer I will check emails regularly. If you need anything or have any questions, please email me at c.bradfield@lausd.net.

Have a great summer and I look forward to seeing you in the fall!

- Mr. Bradfield

APCS 2020-21

Summer Assignment Questions

After reading Chapter 1: “The Way of the Program” in the textbook, answer the following questions. Do this in a Google doc - you’ll be able to turn it in on Schoology when we begin class.

1. How does thinking like a computer scientist compare to thinking like a mathematician, an engineer, and a scientist?
2. What is the single most important skill for a computer scientist? Explain.
3. Java is an example of a high-level language. What is the difference between a high-level language and a low-level language?
4. Name two advantages of programming in a high-level language. Name one disadvantage.
5. In Computer Science/Programming, what does portable mean?
6. What is an interpreter?
7. What is a compiler?
8. What language is used in AP Computer Science?
9. What is source code?
10. What is debugging?

11. What symbol is required at the end of every statement in Java?

12. What is the purpose of curly brackets/braces {} in Java?

13. What are your goals for this class?

14. Tell me something interesting about yourself.