

## AP Computer Science Principles Summer Assignments

Welcome to AP Computer Science Principles. This is the main document for the assignments that you will complete. You will find that there is quite a bit of work for you to do this summer. There are reasons for this that benefit both you and me. I will share them with you, hopefully you agree that it makes sense.

1. AP Computer Science Principles is a year long course. School policy is that after the one week drop add period at the beginning of school, you may not drop the class. I want you to know what you are getting into, which is difficult from the course title and description alone. These assignments are a sampling of the type of work that you will do during the school year. If you find most of it interesting, you'll know the course is a good choice for you. If you have any doubts and think that you wish to drop the class, please let me know.
2. While this course expects that you have no programming experience, it's nice for you to have an idea of what programming is like. In addition, some students may have some prior experience with programming. Item 3 will give everyone some exposure to, so on day one, everyone will have some experience.
3. There are a handful of Big Ideas that you need to be familiar with by the end of the course. The summer work, particularly item 5, guarantees that everyone has exposure to at least some of these terms.
4. I can all but guarantee that if you do all your work and ask for assistance if you need it, you will earn at least a high B in the course , and probably an A. I can also all but guarantee that if you do all your work and ask for assistance if you need it, you will pass the AP Exam in the spring. If you do all of the summer work, I know that you will probably also do all the work during the school year.

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Please use this checklist to verify that you have completed all of your work. In addition, please let me know how much time you think you spent on each assignment.

2020-2021 AP Computer Science Principles Summer Work Checklist			
	Item	Description	Estimated time to complete
	1	Signed Syllabus	
	2a iii	Impacts of Computing - Signed Cyber Security Ethics Agreement.	
	2a iv	Impacts of Computing Scavenger Hunt and Reflection	
	2b	CS Impact on Careers	
	2b	CS Impact on Careers - Follow Up	
	3	Swift Playgrounds - Learn to Code 1	
	4	Read Blown to Bits Chapters 1-3	
	4	Blown to Bits 1-3 Vocabulary	
	4	Blown to Bits 1-3 Double Entry Journal	
	5	Intro to Computational Thinking	

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Please DO NOT wait until the last minute to do your work. Failure to complete your summer work will result in you being dropped from the course.

*NOTE: If there is an extenuating circumstance that prohibits completion of this work prior to the start of school, please let me know*

- 1) Download the linked [2020-2021 APCSP syllabus](#)
  - Read it along with a parent and sign if you agree
  - Once signed, send me a copy with the subject: RE: 2020-2021 Signed APCSP syllabus

- 2) One of the Big Ideas of Computer Science Principles is Impact of Computing.  
Big Idea 5: Impact of Computing (IOC)

*Computers and computing have revolutionized our lives. To use computing safely and responsibly, we need to be aware of privacy, security, and ethical issues. As programmers, we need to understand the potential impacts of our programs and be responsible for the consequences. As computer users, we need to understand any potential beneficial or harmful effects and how to protect ourselves and our privacy when using a computer.*

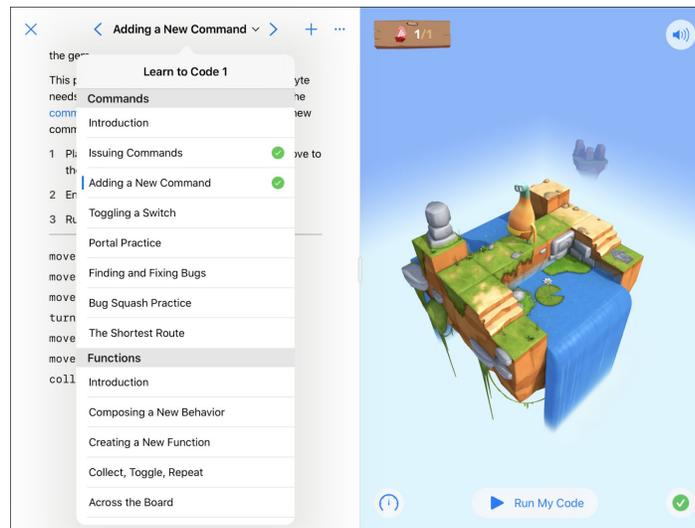
Click [this link](#) to access the Impact of Computing Assignment

- 3) Various aspects of computer programming will be emphasized heavily in this course. While no prior experience was required to sign up, everyone will have at least some experience by the time classes start again in the fall.

*NOTE: I am not sure how long this assignment should take. If the time spent seems unreasonable, please let me know. Depending on how long it takes and how many people believe it is unreasonable, I may reconsider this part of the assignment, though I think it would be great if everyone does it.*

- Download and install the Swift Playgrounds App.
  - i) Once it is downloaded, open it and then install and complete Learn to Code 1.
    - (1) If you are a sophomore, junior, or senior, you must wait until your iPad is reset
    - (2) If you are a freshman, you will need to wait until you get your iPad
- As you complete the lessons in Learn to Code 1, each item that you complete will have a green check. This is how I will verify that your work has been completed. Since it does not include your name, I will need to verify completion on your iPad, in class. Take care of your iPad, or you may need to redo your work.

*NOTE: You may contact me to periodically show me your progress over video chat, then if your work is lost, no worries. This is optional and can be done after each section or after all work is done. Otherwise, show me once school starts.*



- It starts out easy enough, if it gets difficult, feel free to send me a screenshot and I will assist.
  - If you enjoy it, try to Learn to Code 2 Playground, but that is completely optional. You'll notice additional mini puzzles that you might also wish to try
- 4) This course will provide you with the opportunity to learn about some real world impacts of computing. These are things that affect all of us, regardless of whether we plan to have a career in computer science or something else.
- Read Chapters 1-3 of [Blown to Bits](#). It is a little bit dated, but it is still relevant.
  - As you read the first three chapters of B2B, complete the [Blown To Bits worksheet](#).
- 5) Download and read the [Introduction to Computational Thinking](#) packet.
- Instructions for this assignment are in the packet