

Welcome to AP Computer Science A. Let's Get Started!!!

The purpose of the AP Computer Science (APCS) summer assignment is to prepare the student for the challenges in APCS and to ensure the student is aware of the content and commitment level involved in this college level course. **Please read and complete all steps in this document. The assignments are due the first day of school. If you have questions, please email agauthier@stoningtonschools.org and I will reply as soon as possible.**

In this course, collaboration is encouraged but **cheating is not tolerated**. In order to learn the content you must design debug, and write your own programs. You may answer peer questions or help them with design but you may **not** email or let them look at a copy of your code.

Summer Assignment:

1. Watch some of my favorite videos (you may want to share these with your family) and start thinking of what is possible with computers:

a) A Day Made of Glass... Made possible by Corning (2011)

http://www.youtube.com/watch?v=6Cf7IL_eZ38

b) If you liked this and would like to know more then watch A Day Made of Glass 2: Unpacked. The Story Behind Corning's Vision https://www.youtube.com/watch?v=X-GXO_urMow

c) Make the Future - A Career in Computer Science <http://www.youtube.com/watch?v=nvhYDTh9T2A>

2. Read Chapter 1 "The Way of the Program." (Feel free to read beyond chapter 1) Go to <http://greenteapress.com/thinkajava/> and either download onto your google drive or read it online thinkajava.pdf "How to Think Like a Computer Scientist/ Think Java" by Allen B. Downey.

3. Complete the Summer Assignment Questions (below). Turn this in on the first day of school. You will receive one Formative grade for this completed assignment.

4. Finally, you must download Java SDK (software development kit) and JGrasp as your IDE (Integrated Development Environment) on your home computer. (http://spider.eng.auburn.edu/user-cgi/grasp/grasp.pl?dl=download_igrasp.html). Take a screen-shot of it running on your home computer

Looking ahead ... Items you will need for this class:

- a flash drive, or a working Google drive that you have access to both at home AND at school.
- 5 Steps to a 5 AP Computer Science 2019 edition ([It will be released in August](#)). This is supplemental book that you will need for this course. It usually costs about \$18
- Access to a computer about 3 hours per week. If you do not have a computer at home, you can use one at SHS.
- Dedication and Desire to succeed on the College Board AP CSA Exam in May 2019.

Read Chapter 1 of "How to Think Like a Computer Scientist" (<http://greenteapress.com/thinkapjava/>) answer the following questions in complete sentences.

Assignment is due the first day of school and is a Formative grade. (continue on back if needed)

1. How is thinking like a computer scientist similar to the thinking involved in engineering and other sciences?

2. What is the single most important skill for a computer scientist?

3. Describe the differences between a low level and high level language?

4. What are the advantages of programming in a high level language?

5. What does portable mean?

6. What language is used in AP Computer Science?

7. What is a compiler?

8. What is source code?

9. What is debugging?

10. What are your personal goals for this course?