



Mr. Kerr  
 Room C201  
 (530) 268 – 3700  
 jkerr@njuhsd.com

## Code.org AP<sup>®</sup> Computer Science Principles Curriculum

Code.org's Computer Science Principles (CS Principles) curriculum is a full-year, rigorous, entry-level course that introduces high school students to the foundations of modern computing. The course covers a broad range of foundational topics such as programming, algorithms, the internet, big data, digital privacy and security, and the societal impacts of computing.

### Curriculum Overview and Goals

Computing affects almost all aspects of modern life, and all students deserve an education that prepares them to pursue the wide array of intellectual and career opportunities that computing has made possible. This course seeks to provide foundational knowledge and skills to meaningfully participate in our increasingly digital society, economy, and culture.

<b>Unit 1:</b> The Internet	Learn how the multi-layered systems of the internet function as you collaboratively solve problems and puzzles about encoding and transmitting data, both 'unplugged' and using Code.org's Internet Simulator.
<b>Unit 2:</b> Digital Information	Learn how computers store complex information like images, video, and sound. Use interactive widgets to explore concepts like image representation and compression.
<b>Unit 3:</b> Intro to Programming	Learn the JavaScript language with turtle programming in Code.org's App Lab coding environment. Learn general principles of algorithms and program design that apply to any programming language.
<b>Unit 4:</b> Big Data and Privacy	Research current events at the intersection of data, public policy, law, ethics, and societal impact. Learn the basics of how and why modern encryption works.
<b>Explore PT Prep</b>	Practice and then complete the Explore Performance Task (PT).
<b>Unit 5:</b> Building Apps	Continue learning how to program in the JavaScript language. Use Code.org's App Lab environment to create a series of applications that live on the web. Each app highlights a core concept of programming.
<b>Create PT Prep</b>	Practice and then complete the Create Performance Task (PT).

## AP Endorsement

The College Board recognizes Code.org as an endorsed provider of curriculum and professional development for AP Computer Science Principles. This endorsement affirms that all components of Code.org CS Principles' offerings align to the AP Curriculum Framework standards and the AP CS Principles assessment. When you register your AP class using materials from an endorsed provider, your course is pre-approved for the College Board's AP Course Audit. AP Endorsement also means that Code.org's Professional Development program satisfies the College Board's guidelines for teacher preparation for the course.



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**For more information on the syllabus and platform we'll be using, click here:**

### [AP CS Principles Syllabus info.](#)

#### **Grades:**

- Grades will comprise points earned through daily assignments, tests, quizzes, essays, and presentations: A = 100 – 90%, B = 89 – 80%, C = 79 – 70%, D = 69 – 60%, and F = 59% and below.
- Any student who wishes to discuss a grade must make an appointment before school, after school, or during Bruin Time; class time will not be used to discuss individual grades.

#### **Late Work / Extra Credit Policy:**

- No late homework accepted for full credit.
- Late homework will only be accepted for half credit to raise a student's grade to passing.
- All major assignments are due on the due date—if you are sick or on vacation, leave work in my box, or e-mail it to me by 3:00 that day.
- Extra credit will be offered. You may earn up to 3 extra credit percentage points per semester.

#### **Absences**

**You** are responsible for everything that happens in the classroom whether you are present or absent. If you have questions about what you have missed, please make an appointment to see me (before school, lunch, or Bruin Time). You have as many days to make up the assignment as days missed (this does not include major assignments which are due on the date assigned).

#### **Classroom Rules**

- You will show the proper respect to all the people, equipment, furnishings, and ideas in Mr. Kerr's classroom.
- At the time that class is scheduled to begin, you will be in your seat, prepared for the day, working and ready to learn.
- You will follow directions the first time they are given.
- You will observe all the rules in the student handbook.

## Classroom Management Policies:

<b>Infraction</b>	<b>Rationale</b>	<b>Consequences</b>
<b>Missing Assignments</b>	Missing assignments are a major obstacle to academic success at BRHS. Most students who receive “D” or “F” grades do so because they have not completed assigned work.	When missing assignments begin to negatively impact students’ grades, students will be assigned Bruin Time (BT) in my classroom. Students should use the time to complete missing assignments, and must submit all work accomplished in Bruin Time to the teacher in charge.
<b>Cheating/Plagiarism</b>	Cheating will not be tolerated. Cheating interferes with a student’s own learning, but it is also unfair to other students who work hard to do well in school.	Referral and/or suspension from class; zero points on assignment for <u>all</u> students involved.
<b>Tardies</b>	Tardies are extremely disruptive not only to the late student, but also to the entire class.	3 class tardies (unexcused) will result in 1 hour after school detention.
<b>Forgetting Materials</b>	It is impossible for students to learn if they do not have the materials necessary to do so—paper, pens, books, etc. It is not fair to rely on fellow classmates for materials, nor is it the responsibility of teachers to provide them.	Each teacher will designate a fixed number of points for <b>Classroom Participation Points</b> , and students will automatically be given these points at the beginning of each semester (i.e., 50 points). Forgetting materials (and other infractions) will result in the subtraction of some of these points from the student (i.e., -5 for no book).
<b>Cell phones/electronic devices</b>	Students must focus wholly on classroom activities and instruction. This focus is virtually impossible with the distractions/disruptions cell phones, etc. cause.	Phone/device confiscated and sent to Assistant Principal; possible reduction in Class Participation Points.
<b>Defiance/Disrespect</b>	Students must treat the teacher and each other with the utmost respect.	Possible referral to Assistant Principal; possible reduction from Class Participation Points.
<b>Cutting Class</b>	Unexcused absences automatically reduce a student’s grades.	No credit or makeup work is possible after a cut and students will be referred to Assistant Principal.
<b>Destruction of School Property (books, desks, computers, etc.)</b>	Care and diligence are required when using school-provided materials. Destruction of such materials creates myriad problems for teachers and future students.	Possible referral; compensation may be required; reduction from Classroom Participation Points.
<b>Food and Drink</b>	Food and drink tend to create unnecessary distractions to the learning process and can damage school property.	Possible reduction from Classroom Participation Points; individual teacher discretion.

