

California Standards Alignment with Python with Robots Curriculum

	Unit 1	Unit 2	Unit 3	Unit 4
Computing Systems				
6-8.CS.1 Design modifications to computing devices in order to improve the ways users interact with the devices.				
6-8.CS.2 Design a project that combines hardware and software components to collect and exchange data.				
6-8.CS.3 Systematically apply troubleshooting strategies to identify and resolve hardware and software problems in computing systems.				
Networks and the Internet				
6-8.NI.4 Model the role of protocols in transmitting data across networks and the Internet.				
6-8.NI.5 Explain potential security threats and security measures to mitigate threats.				
6-8.NI.6 Apply multiple methods of information protection to model the secure transmission of information.				
Data and Analysis				
6-8.DA.7 Represent data in multiple ways.				
6-8.DA.8 Collect data using computational tools and transform the data to make it more useful.				
6-8.DA.9 Test and analyze the effects of changing variables while using computational models.				
Algorithms and Programming				
6-8.AP.10 Use flowcharts and/or pseudocode to design and illustrate algorithms that solve complex problems.				
6-8.AP.11 Create clearly named variables that store data, and perform operations on their contents.				
6-8.AP.12 Design and iteratively develop programs that combine control structures and use compound conditions.				
6-8.AP.13 Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs.				
6-8.AP.14 Create procedures with parameters to organize code and make it easier to reuse.				
6-8.AP.15 Seek and incorporate feedback from team members and users to refine a solution that meets user needs.				
6-8.AP.16 Incorporate existing code, media, and libraries into original programs, and give attribution.				
6-8.AP.17 Systematically test and refine programs using a range of test cases.				

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6-8.AP.18 Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts.				
6-8.AP.19 Document programs in order to make them easier to use, read, test, and debug.				
Impacts of Computing				
6-8.IC.20 Compare tradeoffs associated with computing technologies that affect people's everyday activities and career options.				
6-8.IC.21 Discuss issues of bias and accessibility in the design of existing technologies.				
6-8.IC.22 Collaborate with many contributors when creating a computational artifact.				
6-8.IC.23 Compare tradeoffs associated with licenses for computational artifacts to balance the protection of the creators' rights and the ability for others to use and modify the artifacts.				
6-8.IC.24 Compare tradeoffs between allowing information to be public and keeping information private and secure.				