

Alaska Standards Alignment with Python with Robots Curriculum

	Unit 1	Unit 2	Unit 3	Unit 4
Computing Systems				
6.CS.D.01 Review and analyze device(s) based on personal use and recommend improvements to the device.				
6.CS.HS.01 Identify ways that hardware and software (User Interface) design are combined to collect and exchange data.				
6.CS.T.01 Identify and discuss increasingly complex software and hardware problems with computing devices and their components.				
Networks & the Internet				
6.NI.NC0.01 Model a simple protocol for transferring information using packets.				
6.NI.C.01 Identify existing cybersecurity concerns with the Internet and systems it uses.				
6.NI.C.02 Explain the importance of secured websites and describe how one method of encryption works.				
Data and Analysis				
6.DA.S.01 Identify how the same data can be represented in multiple ways.				
6.DA.CVT.01 Collect data using computational tools and transform the data to make it more useful (e.g., spreadsheet formulas)				
6.DA.IM.01 Use models and simulations to formulate, refine, and test hypotheses.				
Algorithms and Programming				
6.APA.01 Use an existing algorithm in natural language or pseudocode to solve complex problems				
6.APV.01 Develop programs that utilize combinations of repetition, conditionals, functions, and the manipulation of variables representing different data types.				
6.APM.01 Decompose (break down) problems into abstraction layers to facilitate the design, implementation, and review of programs.				
6.APPD.01 Seek and incorporate feedback from team members to refine a solution to a problem.				
6.APPD.02 Incorporate existing code, media, and libraries into original programs and give attribution.				
6.APPD.03 Test and refine programs using teacher provided inputs.				
6.APPD.04 Break down tasks and follow an individual timeline when developing a computational artifact.				
6.APPD.05 Document block-based or text-based programs in order to make them easier to follow, test, and debug.				
Community, Global and Ethical Impacts				
6.GCEI.C.01 Explain how computing impacts people's' everyday activities and explore careers related to the field of computer science.				
6.GCEI.C.02 Identify and discuss the technology proficiencies needed in the classroom and the workplace, and how to meet the needs of diverse users.				
6.GCEI.SI.01 Individually and collaboratively develop and conduct an online survey that seeks input from a broad audience. Describe and use safe, appropriate, and responsible practices (netiquette) when participating in online communities (e.g., discussion groups, blogs, social networking sites).				
6.GCEI.SLE.01 Differentiate between appropriate and inappropriate content on the Internet, and identify unethical and illegal online behavior.				
6.GCEI.SLE.02 Identify what distinguishes humans from machines focusing on human intelligence versus machine intelligence (e.g., robot motion; speech and language understanding; computer vision).				