Alaska Computer Science

Grade 5

Computing Systems

Devices

1 Define, discuss, and model how computer hardware and software work together as a system to accomplish tasks (e.g., input, output, processor, sensors, and storage). 5.CS.D.01

Hardware and Software

1 Define, discuss, and model how information flows through hardware and software to accomplish tasks such as converting a word to binary. 5.CS.HS.01

Troubleshooting

1 Identify, discuss, and apply strategies for solving simple hardware and software problems that may occur using everyday use (e.g., rebooting the device; checking the power; force shut down of an application). 5.CS.T.01

Network and the Internet

Network Communication and Organization

1 Recognize, explain, and model how information is broken down into packets (smaller pieces), transmitted between devices, and reassembled. 5.NI.NCO.01

Cybersecurity

1 Discuss real-world cybersecurity problems and how personal information can be protected. Discussion topics could be based on current events related to cybersecurity or topics that are applicable to students. 5.NI.C.01

Data Analysis

Storage

1 Using correct terminology explain why various types of files differ in size (e.g., video, images and documents). 5.DA.S.01

Collection, Visualization and Transformation

1 Collect, organize, interpret, and display data to highlight relationships and support a claim. 5.DA.CVT.01

Inference and Models

1 Use data to highlight or propose cause and effect relationships, predict outcomes, or communicate an idea. 5.DA.IM.01

Skip to main content

Algorithms Programming

1 Compare and refine multiple algorithms for the same task and determine which is the most appropriate. 5..AP.A.01

Variables

1 Create programs that use variables to store and modify grade level appropriate data. 5.AP.V.01

Modularity

1 Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features. 5.AP.M.01

Program Development

1 Define the concept of abstraction and create increasingly complex programs. 5.AP.PD.01

2 Observe intellectual property rights and give appropriate credit when creating or remixing programs. 5.AP.PD.02

Community, Global and Ethical Impacts

Culture

1 Discuss ongoing trends in technologies that have changed the world, and express how those trends influence and are influenced by cultural practices. 5.CGEI.C.01

2 Brainstorm ways to improve the accessibility and usability of technology products for the diverse needs and wants of users. 5.CGEI.C.02

Social Interactions

1 Develop a code of conduct, explain, and practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. 5.CGEI.SI.01

2 As a team, collaborate with outside resources (other grade levels, online collaborative spaces) to include diverse perspectives to improve computational products. 5.CGEI.SI.02

Safety, Law and Ethics

1 Observe intellectual property rights, give appropriate credit when using resources and consider the licenses on computational artifacts while using resources. 5.CGEI.SLE.01