Alaska Computer Science

Grade 3

Computing Systems

Devices

1 Define how computer hardware and software work together as a system to accomplish tasks (e.g., input, output, processor, sensors, and storage). 3.CS.D.01

Hardware and Software

1 Define binary, and how that relates to computers transmitting information. Review Binary's relationship to off and on. 3.CS.HS.01

Troubleshooting

1 Identify and discuss simple hardware and software problems that may occur during everyday use. 3.CS.T.01

Network and the Internet

Network Communication and Organization

1 Recognize that information is sent and received over both physical or wireless paths. 3.NI.NCO.01

Cybersecurity

1 Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use. 3.NI.C.01

Data Analysis

Storage

1 Recognize that different applications work with different types of files (e.g., images, documents). 3.DA.S.01

Collection, Visualization and Transformation

1 Collect and organize data in a spreadsheet. 3.DA.CVT.01

Inference and Models

1 With guidance, utilize data to make predictions and discuss whether there is adequate data to make reliable predictions. 3.DA.IM.01

Algorithms and Programming

Algorithms

1 Create and follow algorithms to accomplish a simple task or solve a simple problem 3.AP.A.01

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1 Create programs that use variables to store and modify grade level appropriate data. 3.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. 3.AP.M.01

Program Development

1 Outline problems and potential solutions using a sequence of steps and conditional logic (e.g., if-then-else statements). 3.AP.PD.01

2 Observe intellectual property rights and give appropriate credit when creating or remixing programs. 3.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. 3.CGEI.C.01

2 Brainstorm ways to improve the accessibility and usability of technology product for the diverse needs and wants of users. 3.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. 3.CGEI.SI.01

2 Identify how computational products may be, or have been, improved to incorporate diverse perspectives. Seek diverse perspectives for the purpose of improving computational artifacts. 3.CGEI.SI.02

Safety, Law and Ethics

1 Identify types of digital data that may have intellectual property rights that prevent copying or require attribution. 3.CGEI.SLE.01