Alaska Computer Science

Grade 2

Computing Systems

Devices

1 Select and use a computing device to perform a variety of tasks for an intended outcome. 2.CS.D.01

Hardware and Software

1 Identify computer system components and peripherals, and their basic use (e.g., hard drive, memory, processor). 2.CS.HS.01

Troubleshooting

1 Identify simple hardware and software problems that may occur during use and discuss problems with peers and adults (e.g., app or program is not working as expected; no sound is coming from the device; caps lock turned on). 2.CS.T.01

Network and the Internet

Network Communication and Organization

1 Recognize that computing devices can be connected at various scales (e.g., Bluetooth, Wi-Fi). 2.NI.NCO.01

Cybersecurity

1 Explain what passwords are; why we use them, and write and design strong passwords to protect devices and information from unauthorized access. Identify other forms of authentication (biometrics). 2.NI.C.01

Data Analysis

Storage

1 With guidance, create, copy, locate, modify, and delete a file on a computing device and define the information stored as data. 2.DA.S.01

Collection, Visualization and Transformation

1 With guidance, collect and present the same data in various visual formats. 2.DA.CVT.01

Inference and Models

1 With guidance, construct and interpret data and present it in a chart or graph (visualization) in order to make a prediction, with or without a computing device. 2.DA.IM.01

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Algorithms Programming

1 With guidance, model daily processes by creating and following algorithms (sets of step-by- step instructions) to complete tasks verbally, kinesthetically, with robot devices, or a programing language. 2.AP.A.01

Variables

1 Model the way a computer program manipulates grade level appropriate data (e.g., print, numbers, kinesthetic movement, symbols and robot manipulatives). 2.AP.V.01

Control

1 With guidance, create programs using a programming language, robot device or unplugged activity that utilize sequencing and repetition to solve a problem or express ideas both independently and collaboratively. 2.AP.C.01

Modularity

1 Decompose (break down) and explain the steps needed to solve a problem into a precise sequence of instructions. 2.AP.M.01

Program Development

1 Independently or with guidance, create a grade level appropriate document to illustrate thoughts, ideas, and stories in a sequential (step-by- step) manner (e.g., story map, storyboard, and sequential graphic organizer). 2.AP.PD.01

2 Independently or with guidance give credit to ideas, creations and solutions of others while writing and/or developing programs. 2.AP.PD.02

3 Independently and collaboratively, create and debug programs, which include sequencing and repetition to accomplish tasks as a means of creative expression or problem solving using a programming language and/or unplugged activities. 2.AP.PD.03

4 Use correct terminology (debug, program input/output, code ...) to explain the development of an algorithm to solve a problem in an unplugged activity, hands on manipulatives or a programming language. 2.AP.PD.04

Community, Global and Ethical Impacts

Culture

1 List different technology tools, and describe how people use them in their daily work and personal lives. 2.CGEI.C.01

Social Interactions

1 Develop a code of conduct, explain, and practice grade-level appropriate behavior and responsibilities while participating in a digital community. Identify and report inappropriate behavior. 2.CGEI.SI.01

Safety, Law and Ethics

1 Be able to explain the reasoning of keeping login information private. Keep log in information private, and log off of devices appropriately. 2.CGEI.SLE.01