

Grade 1

COMPUTING SYSTEMS CS

D. Devices CS.D

- a Operate commonly used devices and their components to perform a variety of tasks. CS.D.1.A
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HS. Hardware and Software CS.HS

- a With guidance, describe and use hardware and software necessary for accomplishing a task. CS.HS.1.A
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Troubleshooting

- a With guidance, use problem solving strategies to troubleshoot a problem. CS.T
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NETWORKS AND THE INTERNET NI

N. Networking NI.N

- a Create a list of ways information can be shared electronically to gain a deeper understanding of how information is transmitted (e.g., email, social media). NI.N.1.A
 - b Recognize that computing devices can be connected to retrieve information from the global community. NI.N.1.B
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C. Cybersecurity NI.C

- a Identify and use secure practices (e.g., passwords) to protect private information. NI.C.1.A
 - b Identify, use and discuss examples of how devices can be used with good and bad intentions. NI.C.1.B
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IOT. Internet of Things (IoT) NI.IOT

- a Identify what smart devices are and how they connect to the internet. NI.IOT.1.A
 - b Recognize how devices connect and exchange data over the internet to demonstrate how information is shared. NI.IOT.1.B
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DATA AND ANALYSIS DA

DCS. Data Collection and Storage DA.DCS

- a With guidance, collect and organize data to retrieve for later use. DA.DCS.1.A
- b With guidance, demonstrate how data can be collected and stored in a variety of ways. DA.DCS.1.B

VC. Visualization and Communication DA.VC

- a Organize and present data in various formats to make observations. DA.VC.1.A

IM. Inference and Modeling DA.IM

- a Create and explain a model of an object or process that includes patterns and key elements. DA.IM.1.A

**ALGORITHMIC THINKING
AND PROGRAMMING** ATP**A. Algorithms** ATP.A

- a With guidance, model a real-world process by constructing and following step-by-step directions (i.e., algorithms) to complete tasks. ATP.A.1.A

VDR. Variables and Data Representation ATP.VDR

- a Categorize a group of items (e.g., numbers, symbols or pictures) based on the attributes or actions of each item, with or without a computing device. ATP.VDR.1.A

CS. Control Structures ATP.CS

- a With guidance, model a sequence of instructions (i.e., program) that includes repetition (i.e., loops) to solve a problem or express ideas. ATP.CS.1.A

M. Modularity ATP.M

- a With guidance, break down (i.e., decompose) a series of steps and separate the necessary from the unnecessary steps to create a precise sequence of instructions to solve a problem or express an idea. ATP.M.1.A

PD. Program Development ATP.PD

- a With guidance, plan and create an artifact to illustrate thoughts, ideas and problems in a sequential (step-by-step) manner (e.g., story map, storyboard, sequential graphic organizer). ATP.PD.1.A
- b With guidance, identify and fix (i.e., debug) a multi-step process that includes sequencing. ATP.PD.1.B

**ARTIFICIAL
INTELLIGENCE** AI**P. Perception** AI.P

- a With guidance and support, recognize sensors on computers, robots and intelligent appliances to understand their function, such as motion, pressure/touch, temperature, proximity, light, sound, moisture or gases. AI.P.1.A
- b With guidance and support, use intelligent agents to help answer simple questions. AI.P.1.B

RR. Representation & Reasoning AI.RR

- a Use a decision tree to make a decision. AI.RR.1.A

ML. Machine Learning AI.ML

- a With guidance and support, discuss how a classifier recognizes drawings to gain an understanding of how machine learning works. AI.ML.1.A
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NI. Natural Interactions AI.NI

- a Using recognition software, identify attributes that computers use for identification to explain how computers recognize humans. AI.NI.1.A
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SI. Societal Impacts AI.SI

- a Identify AI applications that are used in daily lives to predict AI use in the future. AI.SI.1.A
 - b Discuss if computers and other technology are good or bad to create a working construct. AI.SI.1.B
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**IMPACTS OF
COMPUTING** IC**Cu. Culture** IC.CU

- a Discuss different technologies and their impact on everyday life. IC.CU.1.A
 - b Identify how people use and are impacted by many types of technologies in their daily work and personal lives. IC.CU.1.B
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SI. Social Interactions IC.SI

- a With guidance, describe safe and responsible behaviors for the use of information and technology. IC.SI.1.A
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SLE. Safety, Law and Ethics IC.SLE

- a With guidance, discuss appropriate and ethical uses of technology to guide informed decisions. IC.SLE.1.A
- b Discuss examples of appropriate and inappropriate behavior online, including cyberbullying, and the steps to keep yourself and others safe and out of harm's way. IC.SLE.1.B