Maryland Computer Science

Grade 3

Computing Systems CS

D. Devices D

1 Identify internal and external parts of computing devices that function together to form a system. 3.CS.D.01

HS. Hardware & Software HS

1 Identify a variety of ways computer hardware and software work together as a system to accomplish a task. 3.CS.D.01

T. Troubleshooting T

1 Identify and troubleshoot, using appropriate technical terminology, simple hardware and software problems that may occur during everyday use, discuss problems with peers and adults (e.g., viruses, malware, versions of software and non-working applications, refresh screen, closing/reopening application, adjusting volume on headphones or speakers). 3.CS.D.01

Networks and the Internet NI

NCO. Network Communication & Organization NCO

1 Recognize how information is sent and received over physical and wireless pathways. 3.NI.NCO.01

C. Cybersecurity C

1 Discuss basic issues that relate to responsible use of computing devices and describe consequences of inappropriate use in a variety of locations. 3.NI.C.01

Not addressed at this level.

Data Analysis DA

S. Storage S

1 Recognize that different types of information are stored in different formats that have varying characteristics, which could include associated programs and storage requirements. 3.DA.S.01

CVT. Collection, Visualization & Transformation CVT

1 Collect, organize, and present the same data in a variety of visual formats (e.g., charts, graphs, tables, etc.). 3.DA.CVT.01

IM. Inference & Models IM

1 Utilize data to make predictions and discuss whether there are sufficient data to make these predictions and extrapolations. 3.DA.IM.01

Algorithms and Programming AP

A. Algorithms A

1 Develop and compare multiple algorithms for the same task. 3.AP.A.01

V. Variables V

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

C. Control C

1 Create programs using a programming language that includes sequences, loops, conditionals, and variables to solve a problem or express an idea. 3.AP.C.01

M. Modularity M

1 Decompose a simple problem into a precise set of sequences instructions. 3.AP.M.01

2 Modify, remix, or incorporate portions of an existing program into one's own work, to develop or add more advanced features (grade-level appropriate). 3.AP.M.02

PD. Program Development PD

1 Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences while solving simple problems. 3.AP.PD.01

2 Identify instances of remixing, when ideas are borrowed and treated upon, and provide attribution 3.AP.PD.02

3 Analyze and debug an existing program or algorithm that includes sequencing, repetition, and variables in a programming language. 3.AP.PD.03

4 Communicate and explain program development to peers and adults using comments, presentations, and demonstrations. 3.AP.PD.0

Impacts of Computing IC

C. Culture and Diversity C

1 Identify how different technologies created by people from diverse backgrounds have contributed to computing and helped to change the world. 3.IC.C.01

2 Identify potential problems that limit accessibility/usability and how computing devices have built-in features to increase accessibility for all users. 3.IC.C.0

SI. Social Interactions SI

1 Develop a code of conduct, explain, and practice grade-level appropriate behavior and responsibilities while participating online. Identify and report inappropriate behavior. 3.IC.SI.01

2 Identify how computing devices and computational products have been, or can be, improved by incorporating diverse perspectives. 3.IC.SI.02

SLE. Safety, Law & Ethics SLE

1 Introduce intellectual property concepts and identify types of digital data (music, videos, photos) that may have intellectual property rights preventing copying and/or requiring attribution 3.IC.SLE.01