

# Third Grade

## Computing Systems (CS) 3.CS

### D. Devices D

- 1 Select and use computing systems to perform a variety of tasks for an intended outcome. 3.CS.D.01

### HS. Hardware & Software (HS) HS

- 1 Model how information flows through hardware and software to accomplish tasks. 3.CS.HS.01

### T. Troubleshooting T

- 1 Identify, using accurate terminology, simple hardware and software problems that may occur during everyday use, discuss problems with peers and adults, and apply strategies for solving these problems (e.g., refresh screen, closing/reopening an application or file). 3.CS.T.01

## Networks & The Internet (NI) 3.NI

### NCO. Network Communication & Organization (NCO) NCO

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

### CY. Cybersecurity (CY) CY

- 1 Identify problems that relate to inappropriate use of computing devices and networks. 3.NI.CY.01

## Data Analysis (DA) 3.DA

### S. Storage (S) S

- 1 Recognize that different types of information are stored in different formats that have associated programs (e.g., documents open in a word processor) and varied storage requirements. 3.DA.S.01

### CVT. Collection, Visualization, & Transformation (CVT) CVT

- 1 Collect and organize data in various visual formats. 3.DA.CVT.01

### IM. Inference & Models (IM) IM

- 1 Utilize data to make predictions and discuss whether there is adequate data to make reliable predictions. 3.DA.IM.01

## Algorithms & Programming (AP) 3.AP

### A. Algorithms (A) A

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

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**V. Variables (V)** v

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

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**C. Control (C)** c

- 1 Create programs using a programming language that utilize sequencing, repetition, conditionals, and variables to solve a problem or express ideas both independently and collaboratively. 3.AP.C.01

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**M. Modularity (M)** m

- 1 Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions. 3.AP.M.01
- 2 With grade appropriate complexity, 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.02

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**PD. Program Development (PD)** PD

- 1 Use an iterative process to plan the development of a program while solving simple problems. 3.AP.PD.01
- 2 Observe intellectual property rights and give appropriate credit when creating programs using original code or code reuse. 3.AP.PD.02
- 3 Analyze and debug a program that includes sequencing, repetition, and variables in a programming language. 3.AP.PD.03
- 4 Communicate and explain program development choices using comments, presentations, and demonstrations. 3.AP.PD.04

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**Impacts of Computing (IC)** 3.IC**CU. Culture (CU)** 3.IC.CU

- 1 Identify computing technologies that have changed the world, and express how those technologies influence and are influenced by cultural practices. 3.IC.CU.01
- 2 Consider users' backgrounds and ability levels and identify how computing devices have built-in features for increasing accessibility to these users. 3.IC.CU.02

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**SI. Social Interactions (SI)** 3.IC.SI

- 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.IC.SI.01
- 2 Identify how computational artifacts may be, or have been, improved to incorporate different perspectives. 3.IC.SI.02

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**SLE. Internet Safety, Law, & Ethics (SLE)** 3.IC.SLE

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