Grade 2

COMPUTING SYSTEMS

Devices
CS.D.2.a Select and operate commonly used devices to perform a variety of tasks.

Hardware and Software
CS.HS.2.a Select and use hardware and software necessary for accomplishing a task.

Troubleshooting
CS.T.2.a Use problem solving strategies to troubleshoot a problem.

NETWORKS AND THE INTERNET

Networking
NI.N.2.a Describe how information can be communicated electronically to gain a deeper understanding of how information is transmitted (e.g., email, social media).
NI.N.2.b Use computing devices that are connected to share and receive information from the global community.

Cybersecurity
NI.C.2.a Explain and demonstrate secure practices (e.g., creating strong passwords) to protect private information.

DATA AND ANALYSIS

Data Collection and Storage
DA.DCS.2.a Collect and organize data to store, retrieve and modify.
DA.DCS.2.b Manipulate data to perform various tasks.

Visualization and Communication
DA.VC.2.a Organize, analyze and present data in various formats.

Inference and Modeling
DA.IM.2.a Interpret and analyze data, graphs, models or charts.

ALGORITHMIC THINKING AND PROGRAMMING

Algorithms
ATP.A.2.a Model a real-world process by constructing and following step-by-step instructions (i.e., algorithms) to complete tasks.

Variables and Data Representation
ATP.VDR.2.a Construct a model that shows the way programs store and manipulate data by using numbers or other symbols to represent information.

Control Structures
ATP.CS.2.a Develop a program that uses sequencing and repetition (i.e., loops) to solve a problem or express ideas.

Modularity
ATP.M.2.a 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.

Program Development
ATP.PD.2.a 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.2.b Identify and fix (i.e., debug) a multi-step process that includes sequencing.
IMPACTS OF COMPUTING

Culture

IC.Cu.2.a Compare and contrast how the use of technology has changed to understand its impact on everyday life.

IC.Cu.2.b Describe the ways people use technologies in their daily work and personal lives to understand technology's impact on one's community.

Social Interactions

IC.Si.2.a Compare and contrast safe and responsible behaviors to those that are not when using information and technology.

Safety, Law and Ethics

IC.SLE.2.a Discuss appropriate and ethical uses of technology to guide informed decision.