

# Grade 2

**Concept: Computing Systems (CS)** 2.CS

**D. Subconcept: Devices (D)** 2.CS.D

- 1 Recognize that users have different needs and preferences for technology they used by selecting and operating appropriate devices. 2.CS.D.1

**HS. Subconcept: Hardware and Software (HS)** 2.CS.HS

- 1 Understand how computing systems use both hardware (device) and software (program/app) to process information. 2.CS.HS.1

**T. Subconcept: Troubleshooting (T)** 2.CS.T

- 1 Explain basic hardware (device) and software (program/app) problems using accurate terminology. 2.CS.T.1
- 2 With teacher guidance, use basic troubleshooting strategies. 2.CS.T.2

**Concept: Networks and the Internet (NI)** 2.NI

**C. Subconcept: Cybersecurity (C)** 2.NI.C

- 1 Explain what passwords are and why we use them, and use strong passwords to protect devices and information from unauthorized access. 2.NI.C.1

**NCO. Subconcept: Network, Communication, and Organization (NCO)** 2.NI.NCO

- 1 Students can discuss how computer networks can be used to connect people to other people, places, information, and ideas. 2.NI.NCO.1

**Concept: Data and Analysis (DA)** 2.DA

**CVT. Subconcept: Collection, Visualization and Transformation (CVT)** 2.DA.CVT

- 1 Collect and transform data using digital devices; Display data for communication in various visual formats. 2.DA.CVT.1

**S. Subconcept: Storage (S)** 2.DA.S

- 1 Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data. 2.DA.S.1

**IM. Subconcept: Inference and Models (IM)** 2.DA.IM

- 1 Describe patterns in data to make inferences or predictions. 2.DA.IM.1

**Concept: Algorithms and Programming (AP)** 2.AP

**A. Subconcept: Algorithms (A)** 2.AP.A

- 1 Model daily processes by creating and following algorithms (sets of step-by-step instructions to complete tasks. 2.AP.A.1

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**V. Subconcept: Variables (V)** 2.AP.V

- 1 Model the way programs store and manipulate data by using numbers or other symbols to represent information. 2.AP.V.1

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**C. Subconcept: Control (C)** 2.AP.C

- 1 Develop programs with sequences and simple loops, to express ideas or address a problem. 2.AP.C.1

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**M. Subconcept: Modularity (M)** A2.AP.M

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

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**PD. Subconcept: Program Development (PD)** A2.AP.PD

- 1 Develop plans that describe a program's sequence of events, goals, and expected outcomes. 2.AP.PD.1
- 2 Give attribution (credit) when using the ideas and creations of others while developing programs. 2.AP.PD.2
- 3 Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. 2.AP.PD.3
- 4 Using correct terminology, describe steps taken and choices made during the iterative process of program (procedure) development. 2.AP.PD.4

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**Concept: Impacts of Computing (IC)** 2.IC

**C. Subconcept: Culture (C)** 2.IC.C

- 1 Compare how people live and work before and after the implementation or adoption of new computing technology. 2.IC.C.1

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**SI. Subconcept: Social Interactions (SI)** 2.IC.SI

- 1 Work respectfully and responsibly with others online. 2.IC.SI.1

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**SLE. Subconcept: Safety, Law, and Ethics (SLE)** 2.IC.SLE

- 1 Keep login information private, and log off of devices appropriately. 2.IC.SLE.1