Computer Science Standards

Grade 3

# **Computing Systems**

# **Devices**

* 3.CS.D.01 Define how computer hardware and software work together as a system to accomplish tasks (e.g., input, output, processor, sensors, and storage).

# **Hardware and Software**

* .CS.HS.01 Define binary, and how that relates to computers transmitting information. Review Binary's relationship to off and on.

# **Troubleshooting**

* 3.CS.T.01 Identify and discuss simple hardware and software problems that may occur during everyday use.

# **Network and the Internet**

# **Network Communication and Organization**

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

# **Cybersecurity**

* 3.NI.C.01 Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.

# **Data Analysis**

# **Storage**

* 3.DA.S.01 Recognize that different applications work with different types of files (e.g., images, documents).

# **Collection, Visualization and Transformation**

* **3.DA.CVT.01** Collect and organize data in a spreadsheet.

# **Inference and Models**

* 3.DA.IM.01 With guidance, utilize data to make predictions and discuss whether there is adequate data to make reliable predictions.

# **Algorithms and Programming**

# **Algorithms**

* 3.AP.A.01 Create and follow algorithms to accomplish a simple task or solve a simple problem

# **Variables**

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

# **Control**

# **Modularity**

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

# **Program Development**

* 3.AP.PD.01 Outline problems and potential solutions using a sequence of steps and conditional logic (e.g., if‐then‐else statements).
* 3.AP.PD.02 Observe intellectual property rights and give appropriate credit when creating or remixing programs.

# **Community, Global and Ethical Impacts**

# **Culture**

* 3.CGEI.C.01 Discuss ongoing trends in technologies that have changed the world, and express how those trends influence and are influenced by cultural practices.
* 3.CGEI.C.02 Brainstorm ways to improve the accessibility and usability of technology product for the diverse needs and wants of users.

# **Social Interactions**

* 3.CGEI.SI.01 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.CGEI.SI.02 Identify how computational products may be, or have been, improved to incorporate diverse perspectives. Seek diverse perspectives for the purpose of improving computational artifacts.

# **Safety, Law and Ethics**

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