Ohio's Learning Standards

Computer Science Grade 3

ADOPTED DECEMBER 2018

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Grade 3

COMPUTING SYSTEMS

Devices

CS.D.3.a Explore common components (i.e., parts) of a computing system and their function to understand and describe the role they play in a computer system.

Hardware and Software

CS.HS.3.a Identify and use digital learning tools/devices to support planning, implementing and reflecting upon a defined task.

Troubleshooting

CS.T.3.a Apply troubleshooting strategies given problems and solutions to resolve hardware and software problems.

NETWORKS AND THE INTERNET

Networking

NI.N.3.a Describe how communication occurs when information is sent and received over physical or wireless paths to explain communication systems (e.g., sending an email or visiting a website).

NI.N.3.b Recognize that every device on a network has a unique identification to share or receive information from the global community.

Cybersecurity

NI.C.3.a Explore digital safety concepts in order to explain that information can be both public and private, to determine what information can safely be shared and to know how to use passwords to protect information.

DATA AND ANALYSIS

Data Collection and Storage

DA.DCS.3.a Collect quantitative data over time from multiple sources to perform various tasks.

DA.DCS.3.b Identify different types of information to store in different formats.

Visualization and Communication

DA.VC.3.a Create a chart or graph to inform a target audience about observations and data collected.

Inference and Modeling

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

ALGORITHMIC THINKING AND PROGRAMMING

Algorithms

ATP.A.3.a Construct and reflect on errors in an algorithm to accomplish a given task.

Variables and Data Representation

ATP.VDR.3.a Define and identify a variable, a placeholder for storing a value, to understand how it is used in a multi-step process (i.e., algorithm).

Control Structures

ATP.CS.3.a Create a program using sequences, events, loops and conditionals to solve a problem.

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Modularrity

ATP.M.3.a Decompose (i.e., break down) the steps needed or not needed (i.e., abstraction) into precise sequences of instructions to design an algorithm.

Program Development

ATP.PD.3.a Use a design process to plan the development of a program that solves problems.

ATP.PD.3.b Using a given program known to contain errors, identify and debug errors to ensure it works.

IMPACTS OF COMPUTING

Culture

IC.Cu.3.a Identify computing technologies that have changed the world and express how those technologies influence and are influenced by cultural practice.

IC.Cu.3.b Identify how computing devices have built-in features to increase accessibility to all users.

Social Interactions

IC.SI.3.a Collaborate and consider diverse perspectives to improve digital artifacts.

Safety, Law and Ethics

IC.SLE.3.a Use public domain or Creative Commons media, and refrain from copying or using material created by others without permission.

IC.SLE.3.b Determine whether information should be shared or kept private to protect student identity.

IC.SLE.3.c Communicate the importance of information security to protect one's own digital footprint.

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