Oklahoma Academic Standards for Computer Science {Grades K-2 Final Public Draft}

Concept	Subconcept	Kindergarten	1st Grade	2nd Grade
Computing Systems	Devices	K.CS.D.01 With guidance, follow directions and start to make appropriate choices to use computing devices to perform a variety of tasks.	1.CS.D.01 With guidance, select and use a computing device to perform a variety of tasks for an intended outcome.	2.CS.D.01 Select and use a computing device to perform a variety of tasks for an intended outcome.
	Hardware & Software	K.CS.HS.01 Use appropriate terminology to locate and identify common computing devices and components, in a variety of environments (e.g., desktop computer, laptop computer, tablet device, monitor, keyboard, mouse, printer).	1.CS.HS.01 Use appropriate terminology in naming and describing the function of common computing devices and components (e.g., mouse is used to control the cursor).	2.CS.HS.01 Identify the components of a computer system and what the basic functions are (e.g., hard drive and memory) as well as peripherals (e.g., printers, scanners, external hard drives) and external storage features and their uses (e.g., cloud storage).
	Troubleshooting	K.CS.T.01 Recognize that computing systems might not work as expected and with guidance use accurate terminology to identify simple hardware or so ware problems (e.g., volume turned down on headphones, monitor turned off).	1.CS.T.01 Identify, using accurate terminology, simple hardware and software problems that may occur during use (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on).	2.CS.T.01 Identify using accurate terminology, simple hardware and software problems that may occur during use (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on) and discuss problems with peers and adults.
Networks & The Internet	Network Communication & Organization	K.NI.NCO.01 Recognize that computing devices can be connected together.	1.NI.NCO.01 Recognize that by connecting computing devices together they can share information (e.g., remote storage, printing, the internet).	2.NI.NCO.01 Recognize that computing devices can be connected at various scales (e.g., bluetooth, WiFi, WWW, LAN, WAN, peer-to-peer).
	Cybersecurity	K.NI.C.01 Discuss what passwords are and why we do not share them with others. With guidance, use passwords to access technological devices, apps, etc.	1.NI.C.01 Identify what passwords are; explain why they are not shared; and discuss what makes a password strong. Independently, use passwords to access technological devices, apps, etc.	2.NI.C.01 Explain what passwords are; why we use them, and use strong passwords to protect devices and information from unauthorized access.
Data Analysis	Storage	K.DA.S.01 With guidance, locate, open, modify and save an existing file with a computing device.	1.DA.S.01 With guidance locate, open, modify and save an existing file, use appropriate file-naming conventions, and recognize that the file exists within an organizational structure (drive, folder, file).	2.DA.S.01 With guidance, develop and modify an organizational structure by creating, copying, moving, and deleting files and folders.
	Collection, Visualization, & Transformation	K.DA.CVT.01 With guidance, collect data and present it visually.	1.DA.CVT.01 With guidance, collect data and present it two different ways.	2.DA.CVT.01 With guidance, collect and present the same data in various visual formats. Please make final changes to the standard based on feedback.
	Inference & Models	K.DA.IM.01 With guidance, draw conclusions and make predictions based on picture graphs or patterns (e.g., make predictions based on weather data presented in a picture graph or complete a pattern).	1.DA.IM.01 With guidance, identify and interpret data from a chart or graph (visualization) in order to make a prediction, with or without a computing device.	2.DA.IM.01 With guidance, construct and interpret data and present it in a chart or graph (visualization) in order to make a prediction, with or without a computing device.

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Algorithm & Programming	Algorithms	K.AP.A.01 With guidance, model daily processes and follow algorithms (sets of step-by-step instructions) to complete tasks verbally, kinesthetically, with robot devices, or a programing language.	1.AP.A.01 With guidance, model daily processes and follow algorithms (sets of step-by-step instructions) to complete tasks verbally, kinesthetically, with robot devices, or a programing language.	2.AP.A.01 With guidance, model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks verbally, kinesthetically, with robot devices, or a programing language.
	Variables	K.AP.V.01 With guidance, recognize that computers represent different types of data using numbers or other symbols.	1.AP.V.01 With guidance, model the way that a program accesses stored data using a variable name.	2.AP.V.01 Model the way a computer program stores, accesses, and manipulates data that is represented as a variable.
	Control	K.AP.C.01 With guidance, independently or collaboratively create programs to accomplish tasks using a programming language, robot device, or unplugged activity that includes sequencing (i.e., emphasizing the beginning, middle, and end).	1.AP.C.01 With guidance, independently or collaboratively create programs to accomplish tasks using a programming language, robot device, or unplugged activity that includes sequencing and repetition.	2.AP.C.01 With guidance, independently and collaboratively create programs to accomplish tasks using a programming language, robot device, or unplugged activity that includes sequencing and repetition.
	Program Development	K.AP.PD.01 With guidance, create a grade-level appropriate artifact to illustrate thoughts, ideas, or stories in a sequential (step-by-step) manner (e.g., story map, storyboard, and sequential graphic organizer).	1.AP.PD.01 Independently or with guidance, create a grade-level appropriate artifact to illustrate thoughts, ideas, or stories in a sequential (step-by-step) manner (e.g., story map, storyboard, and sequential graphic organizer).	2.AP.PD.01 Independently or with guidance, create a grade-level appropriate artifact to illustrate thoughts, ideas, or stories in a sequential (step-by-step) manner (e.g., story map, storyboard, and sequential graphic organizer).
		K.AP.PD.02 Independently or with guidance give credit to ideas, creations and solutions of others while developing algorithms.	1.AP.PD.02 Independently or with guidance give credit to ideas, creations and solutions of others while writing and/or developing programs.	2.AP.PD.02 Give credit to ideas, creations and solutions of others while writing and developing programs.
		K.AP.PD.03 With guidance, independently or collaboratively debug algorithms using a programming language and/or unplugged activity that includes sequencing.	1.AP.PD.03 With guidance, independently or collaboratively debug programs using a programming language and/or unplugged activity that includes sequencing and repetition.	2.AP.PD.03 With guidance, independently and collaboratively debug programs using a programming language and/or unplugged activity that includes sequencing and repetition.
		K.AP.PD.04 Use correct terminology (beginning, middle, end) in the development of an algorithm to solve a simple problem.	1.AP.PD.04 Use correct terminology (first, second, third) and explain the choices made in the development of an algorithm to solve a simple problem.	2.AP.PD.04 Use correct terminology (debug, program input/output, code) to explain the development of an algorithm to solve a problem in an unplugged activity, hands on manipulatives, or a programming language.
Impacts of Computing	Culture	K.IC.C.01 List different ways in which types of technologies are used in your daily life.	1.IC.C.01 Identify how people use different types of technologies in their daily work and personal lives.	2.IC.C.01 Identify and describe how people use different types of technologies in their daily work and personal lives.
	Social Interactions	K.IC.SI.01 With guidance, identify appropriate manners while participating in an online environment.	1.IC.SI.01 With guidance, identify appropriate and inappropriate behavior. Act responsibly while participating in an online community and know how to report concerns.	2.IC.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.