

Essential Skills for Kindergarten

Concept	Sub-concept	Standard	Essential Skills
Computing Systems	Devices	K. CS.D.01 Select and operate the appropriate computing device to perform a variety of different tasks	Distinguish among different computing devices according to their abilities to accomplish different tasks.
Computing Systems	Hardware & Software	K. CS.HS.01 Identify by name and locate common computing devices and external hardware in a variety of environments, using appropriate technical terminology (e.g., mobile devices, desktop computer, laptop computer, mouse, keyboard, wearables).	Identify different computing devices . Identify external hardware components of a computing device using correct terminology.
Computing Systems	Troubleshooting	K. CS.T.01 Recognize the possibility computing systems might not work as expected and identify basic hardware and software problems using appropriate technical terminology (e.g., monitor turned off, volume decreased on headphones).	Use appropriate terminology to identify issue and/or part of computing device that is not functioning correctly.
Networks and the Internet	Network Communication & Organization	K. NI.NCO.01 Recognize that basic computing devices and components can be connected to one another.	Provide examples of networks of devices and uses of the internet. Describe communication with others via email, video chat, etc. in the context of a network of devices.
Networks and the Internet	Cybersecurity	K. NI.C.01 Identify and use passwords and discuss why they are not shared with others.	Use passwords to log in to computing devices and/or programs Exhibit understanding that passwords should not be shared with most others
Networks and the Internet	Cybersecurity	Not addressed at this level.	
Data Analysis	Storage	K.DA.S.01 Identify that information from our everyday lives can be stored and accessed via computing devices.	Identify information that can be stored on a computing device. Identify the information that cannot be stored in a computing device.

Data Analysis	Collection, Visualization & Transformation	K.DA.CVT.01 With guidance, collect data on a basic topic (e.g., weather, temperature) and present it visually.	Collect data on a familiar topic. Display data.
Data Analysis	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, complete a pattern) with or without a computing device.	Identify patterns and trends in picture graphs Make predictions, comparisons, and/or draw conclusions from information in picture graphs or patterns.
Algorithms and Programming	Algorithms	K.AP.A.01 Model daily processes and follow basic algorithms (step-by-step lists of instructions) to complete tasks.	Follow a sequence of instructions to complete a familiar task.
Algorithms and Programming	Variables	K.AP.V.01 With guidance, model the way programs store and manipulate grade-level data by using numbers or other symbols to represent information (e.g., encode or decode words using numbers, pictographs or symbols to letters, words, or direction).	Identify and interpret symbols that are used to represent information such as numbers for quantities or letters for sounds. Create and use symbols to represent information such as establishing hand signals for "I agree" or creating emoji-like symbols for feelings.
Algorithms and Programming	Control	K.AP.C.01 With guidance, create a set of instructions (programs) to accomplish a task using a programming language, device, or unplugged activity, including sequencing, emphasizing the beginning, middle, and end.	Recognize the order of a sequence of instructions or occurrences as the beginning, middle and end. Create a logical sequence of instructions with guidance as needed.
Algorithms and Programming	Modularity	Not addressed at this level	
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Algorithms and Programming	Program Development	K.AP.PD.01 With guidance, create a grade level appropriate document to illustrate thoughts, ideas, or stories in a sequential manner (e.g., storyboard, story map, sequential graphic organizer).	Identify, in order, the steps to describe a process, tell a story, etc. Present ordered steps in a document with teacher assistance, as necessary.
Algorithms and Programming	Program Development	K.AP.PD.02 Give attribution to ideas, solutions, and creations of others, verbally, while developing algorithms.	Identify ideas or items that were created by others that are used in the process of developing algorithms .

Algorithms and Programming	Program Development	K.AP.PD.03 Identify errors in an algorithm that includes sequencing and repeated procedures using a programming language or unplugged activity. Discuss how errors in the algorithm could be corrected.	Describe how an algorithm or series of steps did not work as expected or desired.
Algorithms and Programming	Program Development	K.AP.PD.04 Use correct terminology (e.g., first, second, etc.) in the development of an algorithm to solve a simple problem.	Describe the sequence of an algorithm using appropriate terminology.
Impacts of Computing	Culture and Diversity	K.IC.C.01 Use grade-level appropriate language to identify and describe how people use a variety of technologies and applications in their daily work and personal lives.	Identify different types of technologies that people use in their daily lives.
Impacts of Computing	Culture and Diversity	Not addressed at this level	
Impacts of Computing	Social Interactions	K.IC.SI.01 Identify appropriate and safe behaviors when participating online.	Provide examples of appropriate behavior when on the internet.
Impacts of Computing	Social Interactions	Not addressed at this level	
Impacts of Computing	Safety, Law & Ethics	K.IC.SLE.01 Keep login information private and log off devices appropriately.	Log off applications and devices appropriately. Identify username and password as login information.

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These annotations are a collaboration between [Maryland Center for Computing Education](#) and the [Maryland State Department of Education](#).