Illinois Computer Science

Grades 3-5

Computing Systems	1	Devices: Describe how internal and external parts of computing devices function to form a system. 3-5.CS.01
	2	Hardware and Software: Model how computer hardware and software work together as a system to accomplish tasks. Discuss task specific embedded systems. 3-5.CS.02
	3	Determine potential solutions to solve simple hardware and software problems using common troubleshooting strategies. 3-5.CS.03
Networks and the Internet	4	Network Communication and Organization: Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the internet, and reassembled at the destination. 3-5.NII.04
	5	Cybersecurity: Discuss real-world cybersecurity problems and how personal information can be protected. 3-5.NII.05
Data and Analysis	6	Collection, Visualization, and Transformation: Organize and present collected data visually to highlight relationships and support a claim. 3-5.DA.06
	7	Interference and Models: Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea. 3-5.DA.07
Algorithms and Programming	8	Algorithms: Compare and refine multiple algorithms for the same task and determine which is the most appropriate. 3-5.AP.08
	9	Variables: Create programs that use variables to store and modify data. 3-5.AP.09
	10	Control: Create programs that include sequences, events, loops, and conditionals. 3-5.AP.10
	11	Modularity: Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process. 3-5.AP.11
	12	Modularity: Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features. 3-5.AP.12

	13 Program Development : Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences. 3-5.AP.13
	14 Program Development : Observe intellectual property rights and give appropriate attribution when creating or remixing programs. 3-5.AP.14
	15 Program Development: Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended. 3-5.AP.15
	16 Program Development: Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development. 3-5.AP.16
	17 Program Development: Describe choices made during program development using code comments, presentations, and demonstrations 3-5.AP.17
Impacts of Computing	**18** Culture: Discuss computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices 3-5.IC.18
	19 Culture: Brainstorm ways to improve the accessibility and usability of technology products for the diverse needs and wants of users 3-5.IC.19
	19 Social Interactions : Seek diverse perspectives for the purpose of improving computational artifacts. 3-5.IC.19
	20 Safety Law and Ethics: Use public domain or Creative Commons media and refrain from copying or using material created by others without permission. 3-5.IC.20
Emerging and Future Technologies	**A** Explain that the field of emerging technologies will be evolving and rapidly growing 3-5.ET.A
	B Compare existing and emerging technologies, ideas, and concepts. 3-5.ET.B
	C Describe how emerging technologies are influencing current events at a local and global scale. 3-5.ET.C
	D Predict the positive and negative societal, cultural, and economic impacts that emerging and future technologies may generate. 3-5.ET.D
	E Create new or original work by applying emerging technologies. 3-5.ET.E