

K-12 Computer Science and Digital Fluency Learning Standards



Grades K-1

New York State
Education
Department

K-12 Computer Science and Digital Fluency Learning Standards

Contents

Concept Areas

<u>Impacts of Computing</u>	3
<u>Computational Thinking</u>	4
<u>Networks & System Design</u>	5
<u>Cybersecurity</u>	6
<u>Digital Literacy</u>	7

IMPACTS OF COMPUTING

Society	<p>K-1.IC.1 Identify and discuss how tasks are accomplished with and without computing technology.</p>	<p>Clarifying Statement Common tasks include sending a letter by email vs. post, taking a picture with a smart phone vs. camera, buying something with an app vs. with cash at a store.</p>
	<p>K-1.IC.2 Identify and explain classroom and home rules related to computing technologies and digital information.</p>	<p>Clarifying Statement Rules could include when it's okay to use a device, what programs or apps are okay to use, how to treat the equipment, etc.</p>
Ethics	<p>K-1.IC.3 Identify computing technologies in the classroom, home and community.</p>	<p>Clarifying Statement The focus should be on recognizing familiar computing technologies that we use in our lives.</p>
	<p>K-1.IC.4 Identify public and private spaces in our daily lives.</p>	<p>Clarifying Statement T.04 2 >>BDC Q (T.0802 Tc 10.02 -0 OEMC /0.</p>

COMPUTATIONAL THINKING

Modeling and Simulation	<p>K-1.CT.1 Identify and describe one or more patterns (found in nature or designed) and examine the patterns to find similarities and make predictions.</p>	<p>Clarifying Statement The emphasis is on identifying patterns and then making predictions based on the pattern.</p>
Data Analysis and Visualization	<p>K-1.CT.2 Identify different kinds of data that can be collected from everyday life.</p>	<p>Clarifying Statement The emphasis is on understanding what is data and identifying different types of data, while exploring how data can be collected and sorted.</p>
	<p>K-1.CT.3 Identify ways to visualize data, and collaboratively create a visualization of data.</p>	<p>Clarifying Statement Ways to visualize data include tables, graphs, and charts.</p>
Abstraction and Decomposition	<p>K-1.CT.4 Identify a problem or task and discuss ways to break it into multiple smaller steps.</p>	<p>Clarifying Statement The focus is on identifying a complex (for the age group) task or problem to break apart into smaller steps. The focus should be on understanding why this process is helpful.</p>
	<p>K-1.CT.5 Recognize that the same task can be described at different levels of detail.</p>	<p>Clarifying Statement Instructions to perform a task can be given with more or less detail but still achieve the same result.</p>
Algorithms And Programming	<p>K-1.CT.6 Follow an algorithm to complete a task.</p>	<p>Clarifying Statement The task can be a familiar, daily activity or more abstract. Algorithms at this stage may be short, containing at least three steps, asrcyd.8()6f.2(s)0.T0 1 Tf .</p>



DIGITAL LITERACY

Digital Use	<p>K-1.DL.1 Identify and explore the keys on a keyboard.</p>	<p>Clarifying Statement The focus is on exploring physical and/or touchscreen keyboards, and for students to be able to identify specific keys such as arrow keys, enter, space bar, backspace.</p>
	<p>K-1.DL.2 Communicate and work with others using digital tools.</p>	<p>Clarifying Statement The focus should be on teaching students that people use digital tools to share ideas and work together. Communication and collaboration should be with teacher guidance.</p>
	<p>K-1.DL.3 Conduct a basic search based on a provided keyword.</p>	<p>Clarifying Statement The teacher will provide the keyword to help students conduct basic searches using appropriate tools.</p>
	<p>K-1.DL.4 Use a least one digital tool to create a</p>	

i y 3 h i 1 l a r i f y i n g S t a t