Indiana Science/Computer Science Content Connectors

Computer Science: Grades 6-8

Data & Information	1	Decompose a problem into steps to test possible solutions. (E) 6-8.DI.1A
	2	Analyze collected data and identify a way to make it more useful (e.g., after listening to responses recorded by a microphone, or reading the closed captioning, decide if the responses should be re-recorded to make them clearer). 6-8.DI.2A
	3	Describe that data can be represented in different ways (binary, RGB values [e.g., red, green, and blue intensity], and hexadecimal codes) for the computer to process the information. 6-8.DI.3A
	4	Use visuals (e.g., flowcharts, diagrams, charts) to plan, interpret, break down, or solve a problem. (E) 6-8.DI.4A
Computing Devices & Systems	1	Identify and use the hardware and software components of a system to complete a task. (E) 6-8.CD.1A
	2	Use provided strategies (e.g., checklist, decision tree, flowchart) to identify or fix problems with provided technology. 6-8.CD.2A
	3	Recommend one improvement to the design or functionality of hardware or software based on personal experience. 6-8.CD.3A
	4	Identify what distinguishes human communication from machine communication. 6-8.CD.4A
Programs & Algorithms	1	Iteratively design a simple sequence to complete a process or address a problem. 6-8.PA.1A
	2	Use a provided systematic approach to test and refine a program. (E) 6-8.PA.2A
	3	Add information (e.g., code, media, and libraries) to an original program to produce a desired outcome and give credit to the source. 6-8.PA.3A
	4	Describe what a line of code does in a simple familiar program. 6-8.PA.4A
Networking & the Internet	1	Identify one or more ways to protect electronic information. (E) 6-8.NI.1A
	2	Model how data is transmitted (protocols) across networks and the internet. 6-8.NI.2A

	3 **List ways to protect information transmitted across networks and the internet.** 6-8.NI.3A
Impact & Culture	1 **Demonstrate responsible behavior when using hardware and software and discuss the consequences of misuse. (E)** 6-8.IC.1A
	2 **Make observations regarding, or identify issues of, bias and accessibility with hardware and software/technology.** 6-8.IC.2A
	3 **Create an artifact with a partner or small group using provided criteria, constraints, or design preferences from stakeholders.** 6-8.IC.3A
	4 **Compare tradeoffs between allowing information to be public and keeping information private and secure.** 6-8.IC.4A
	5 **Examine how unequal availability of technology has disadvantaged people who are in marginalized populations.** 6-8.IC.5A