

## Grade 5 (Ages 10–11)

| Concept             | Identifier   | Standard                                                                                                                                                                      |
|---------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Algorithms & Design | E5-ALG-PS-01 | Create a visual representation of an algorithm that includes variables and a combination of sequence, events, iteration, and selection to solve a problem or express an idea. |
|                     | E5-ALG-ML-02 | Train a machine learning model to make a classification or prediction.                                                                                                        |
|                     | E5-ALG-IM-03 | Articulate how human-centered design principles are incorporated into the development of a computing technology.                                                              |
| Programming         | E5-PRO-PD-04 | Create a novel program by modifying or combining elements of existing programs.                                                                                               |
|                     | E5-PRO-PD-05 | Construct individual components of a program that are collaboratively assembled into a programming project.                                                                   |
|                     | E5-PRO-VD-06 | Use variables to store, compare, and modify data within a program.                                                                                                            |
|                     | E5-PRO-RD-07 | Create embedded or external documentation for a programming project.                                                                                                          |
|                     | E5-PRO-TR-08 | Debug a program using systematic strategies.                                                                                                                                  |
| Data & Analysis     | E5-DAT-DC-09 | Use computational tools to collect and organize different types of data.                                                                                                      |
|                     | E5-DAT-DI-10 | Analyze a dataset to identify the nature and possible sources of variability in the data.                                                                                     |
|                     | E5-DAT-IM-11 | Analyze the benefits and risks of a computing technology that uses collected data.                                                                                            |
| Systems & Security  | E5-SYS-HW-12 | Explain how hardware and software components of a computing system work together to perform input and output operations, processing, and storage.                             |
|                     | E5-SYS-SE-13 | Describe the concepts of the CIA triad and how each component is important in protecting information.                                                                         |
|                     | E5-SYS-NT-14 | Distinguish between the components of wired and wireless networks.                                                                                                            |
|                     | E5-SYS-IM-15 | Examine how computing systems impact culture and the ways people live and work.                                                                                               |
| Computing & Society | E5-SOC-HI-16 | Analyze how the inclusion or exclusion of diverse individuals and communities has shaped the design, development, and societal impact of computing technologies.              |
|                     | E5-SOC-ET-17 | Examine how people decide whether or not to use emerging technologies.                                                                                                        |
|                     | E5-SOC-HU-18 | Evaluate when it is appropriate to use or not use computing technologies to solve a problem.                                                                                  |
|                     | E5-SOC-CE-19 | Examine how professionals collaborate while using computing technologies to solve problems.                                                                                   |

