North Dakota Computer Science and Cybersecurity

# 6th Grade

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| **Networks & Internet: Networks link computers and devices locally and around the world allowing people to access and communicate information.** 6.NI | 1 | **Explain how data is sent across networks.** 6.NI.1 |
| **Hardware & Software: Devices, hardware, and software work together as a system to accomplish tasks.** 6.HS | 1 | **Use hardware and/or software to complete a task.** 6.HS.1 |
| | 2 | **Use software features to accomplish a goal.** 6.HS.2 |
| | 3 | **Organize, store, and retrieve digital information with guidance.** 6.HS.3 |
| | 4 | **Identify threats to technology systems. (CYSEC)** 6.HS.4 |
| | 5 | **Identify security measures to protect technology systems. (CYSEC)** 6.HS.5 |
| **Troubleshooting: Strategies for solving technology system problems.** 6.T | 1 | **Apply basic troubleshooting strategies.** 6.T.1 |
| **Problem Solving & Algorithms: Strategies for understanding and solving problems.** 6.PSA | 1 | **Identify and test an algorithm to solve a problem.** 6.PSA.1 |
| | 2 | **Debug a program that includes sequencing, loops, or conditionals.** 6.PSA.2 |
| | 3 | **Compare and contrast the efficiencies of multiple solutions to a task.** 6.PSA.3 |
| **Data Creation & Analysis: Data can be collected, used, and presented with computing devices or digital tools.** 6.DCA | 1 | **Collect and analyze data to support a claim.** 6.DCA.1 |
| **De De cre** | | **Ise programs that utilize combinations of loops, conditionals, and the nanipulation of variables representing different data types.** 6.DD.1 |

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| **imaginative solutions to solve problems.** 6.DD | | |
| **Access: Effective search strategies can locate information for intellectual or creative pursuits.** 6.A | 1 | **Use a variety of strategies to refine and revise search results.** 6.A.1 |
| **Evaluate: Information sources can be evaluated for accuracy, currency, appropriateness, and purpose.** 6.E | 1 | **Evaluate information and its sources.** 6.E.1 |
| **Create: It is important to both consume and produce information to be digitally literate.** 6.C | 1 | **Repurpose or remix original works following fair use guidelines.** 6.C.1 |
| **Intellectual Property: Respect for the rights and obligations of using and sharing intellectual property.** 6.IP | 1 | **With guidance, properly use copyrighted works, works in the creative commons, and works in the public domain.** 6.IP.1 |
| | 2 | **Cite a variety of sources using the appropriate format.** 6.IP.2 |
| | 3 | **Describe negative consequences of piracy and plagiarism.** 6.IP.3 |
| **Impacts of Computing: Past, present, and possible future impact of technology on society.** 6.IC | 1 | **Identify the positive and negative impacts of past, present, and future technology, including bias and accessibility.** 6.IC.1 |
| **Social Interactions: Technology facilitates collaboration with others.** 6.SI | 1 | **Use collaborative technology.** 6.SI.1 |
| | 2 | **Identify how social interactions can impact a person's self-image.** 6.SI.2 |
| **Safety & Ethics: There are both positive and negative impacts in social and ethical behaviors for using technology.** 6.SE | 1 | **Identify steps for responding to uncomfortable situations when interacting online. (CYSEC)** 6.SE.1 |
| | 2 | **Identify basic methods to maintain digital privacy and security. (CYSEC)** 6.SE.2 |
| | 3 | **Recognize that data-collection technology can be used to track navigation online. CYSEC)** 6.SE.3 |

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| | 4 **Identify threats to personal cybersecurity. (CYSEC)** 6.SE.4 |
| **Responsible: Use Respect and dignity in virtual and physical communities.** 6.RU | 1 **Identify different forms of cyberbullying.** 6.RU.1 |
| | 2 **Identify strategies to stop cyberbullying.** 6.RU.2 |
| | 3 **Use appropriate digital etiquette in avariety of situations.** 6.RU.3 |
| | 4 **Understand the purpose of and comply with Acceptable Use Policies.** 6.RU.4 |
| **Digital Identity: The responsibilities and opportunities that come with living, learning, and working in an interconnected digital world.** 6.DI | 1 **Describe personal online usage and determine how it affects identity on- and offline.** 6.DI.1 |