

Grade 8

Computational Thinking [DLCS25.8.CT](#)

AAD Algorithms, Abstraction, and Decomposition [DLCS25.8.CT.AAD](#)

- 1 Utilize a programming language to create algorithms that include sequencing, selection, and iteration. [DLCS25.8.1](#)
- 2 Design multi-branched flowcharts and corresponding pseudocode. [DLCS25.8.2](#)
- 3 Evaluate programs containing nested logic by applying relational and logical operators to trace conditions, and debug when those conditions do not behave as expected. [DLCS25.8.3](#)
- 4 Decompose a problem into multiple parts to identify each part's functionality and support maintenance and future improvements. [DLCS25.8.4](#)
- 5 Create reusable functions that include inputs to change how the function works and explain how using functions makes code easier to reuse and understand. [DLCS25.8.5](#)

P Programming [DLCS25.8.CT.P](#)

- 6 Improve an existing program by adding new features or increase its efficiency. [DLCS25.8.6](#)
- 7 Explain how software is developed, tested, and maintained to ensure quality. [DLCS25.8.7](#)

Data Science [DLCS25.8.DS](#)

DCR Data Collection and Representation [DLCS25.8.DS.DCR](#)

- 8 Design a data store and apply validation techniques. [DLCS25.8.8](#)
- 9 Explain how binary data is used in computing systems to represent and process different types of information. [DLCS25.8.9](#)
- 10 Explain how data size and format affect storage and performance. [DLCS25.8.10](#)

DA Data Analysis [DLCS25.8.DS.DA](#)

- 11 Use digital tools or visualizations to analyze datasets, detect anomalies, and develop narratives based on findings. [DLCS25.8.11](#)
- 12 Explain how AI systems use data to make decisions and predictions.
[AI] [DLCS25.8.12](#)

MS Modeling and Simulation [DLCS25.8.DS.MS](#)

- 13 Develop a model or simulation and evaluate its accuracy and limitations. [DLCS25.8.13](#)
-

Computing Systems DLCS25.8.CS

NI Networks and Internet DLCS25.8.CS.NI

- 14 Create a diagram of a network to meet specific needs, including modems, routers, and servers. DLCS25.8.14
 - 15 Explain how data is broken into packets, sent across the Internet, and reassembled, including how multiple protocols work together for communication. DLCS25.8.15
 - 16 Explain how cloud computing enables data access, including the advantages and limitations of technologies that enable data access. DLCS25.8.16
-

C Cybersecurity DLCS25.8.CS.C

- 17 Dissect a previously occurred cybersecurity breach, identify failure points, and explain how better safeguards could have prevented the attack. DLCS25.8.17
 - 18 Evaluate cybersecurity risks across networks, applications, and cloud-based systems and recommend improvements. DLCS25.8.18
 - 19 Create a personal cybersecurity plan which includes identifying online risks, evaluating their own digital footprint, adjusting privacy settings, and describing steps to protect their accounts and personal information. DLCS25.8.19
-

HS Hardware and Software DLCS25.8.CS.HS

- 20 Demonstrate how hardware components work together in the data processing cycle to perform computing tasks. DLCS25.8.20
 - 21 Complete a project by combining multiple software applications. DLCS25.8.21
 - 22 Evaluate the advantages and disadvantages of open-source and proprietary software in different scenarios. DLCS25.8.22
-

Impact of Computing DLCS25.8.IC

CP Career Paths DLCS25.8.IC.CP

- 23 Research and report on the responsibilities of various careers that use computer science expertise. DLCS25.8.23
-

E Ethics DLCS25.8.IC.E

- 24 Demonstrate safe, legal, and ethical habits when creating and sharing digital content. DLCS25.8.24
 - 25 Evaluate ethical dimensions and societal impacts of AI technologies.
[AI] DLCS25.8.25
-

S Society DLCS25.8.IC.S

- 26 Analyze how computing technologies impact laws and influence social structures over time. DLCS25.8.26
-

ET Emerging Technology DLCS25.8.IC.ET

- 27 Research the use of emerging technologies in everyday life, and report on their benefits and limitations. [AI] DLCS25.8.27

A Accessibility DLCS25.8.IC.A

- 28 Design and implement solutions that address specific accessibility needs, considering feedback and making adjustments. DLCS25.8.28
 - 29 Research and report on provisions of the Americans with Disabilities Act (ADA) regarding the accessibility of technology. DLCS25.8.29
-

Digital Proficiency DLCS25.8.DP

IL Information Literacy DLCS25.8.DP.IL

- 30 Synthesize information from credible sources to create an original product. DLCS25.8.30
 - 31 Explain how digital manipulation influences actions, perceptions, and public opinion. [AI] DLCS25.8.31
-

DL Digital Life DLCS25.8.DP.DL

- 32 Develop strategies to manage screen time, handle multitasking, and balance the use of technology in daily life. DLCS25.8.32
-

DT Digital Tools DLCS25.8.DP.DT

- 33 Evaluate the effectiveness of digital tools for communication and project-based collaboration. DLCS25.8.33
- 34 Compose professional emails and presentations, demonstrating clear purpose, tone, and etiquette across digital platforms. DLCS25.8.34
- 35 Produce new content through guided collaboration with AI systems. [AI] DLCS25.8.35
- 36 Input text at a rate of 35 words per minute via keyboard or alternative text input method. DLCS25.8.36