

Integrated K–5 Digital Literacy & Computer Science (DLCS) Curriculum: Scope & Sequence Overview

Dean S. Luce Elementary, Canton Public Schools, MA · Designed and taught by Will Evans, 2022–2023

A standards-aligned, project- and artifact-based program aligned to the **Massachusetts Digital Literacy and Computer Science (DLCS) Curriculum Framework** (strands CAS, DTC, CS, CT) and the **International Society for Technology in Education (ISTE) Standards for Students** (clusters 1.1–1.7). Nine domains are woven together rather than taught in isolation, building on one another as students progress through each grade level, with each unit culminating in a student-created digital artifact and opportunities to share, reflect, and give feedback throughout. The selection below is representative, not exhaustive. Features of the LMS (Seesaw for K-2 and Google Classroom for 3-5), Pear Deck (K-5), third-party resources, and no-tech options were integrated across the curriculum.

Domain	Representative focus & topics (K→5)	MA DLCS strands	ISTE Standards (Students)	Representative tools & resources
Digital Citizenship	Device care and responsible use; passwords and accounts; digital etiquette — kindness, positivity, and reputation; online meanness and cyberbullying; digital leadership.	K-2.CAS.a.4 3-5.CAS.a.4	Digital Citizen 1.2.a · 1.2.b · 1.2.d	Common Sense Education Digital Citizenship; Be Internet Awesome (Pear Deck); Seesaw — Digital Leadership; BrainPOP / BrainPOP Jr.
Media Literacy	Credibility and reality of digital artifacts; questions for consuming and creating media; recognizing advertising and persuasion; ownership and authorship.	K-2.CAS.b.3 / b.4 3-5.CAS.c.2	Knowledge Constructor 1.3.a · 1.3.b · 1.3.c Creative Communicator 1.6.b	Media Literacy Questions resource (own design); Project Look Sharp; NAMLE Media Monsters; Admongo; Ruff Ruffman — Humble Media Genius.
Digital Wellness	Healthy habits and ergonomics; online safety and social interaction; privacy and security; digital footprint and identity.	K-2.CAS.a.1 / a.5 / a.7 K-2.CAS.a.4	Digital Citizen 1.2.a · 1.2.c · 1.2.d	Common Sense Education; Be Internet Awesome; NAMLE Media Monsters; CS-strand privacy resources.
Digital Tools	Operating digital tools and the LMS; searching the library catalog; hardware, software, and peripherals; a multi-step research → create → reference → share project; keyboarding; navigating the internet.	K-2.DTC.a.1 K-2.CS.b.2 · 3- 5.CAS.c.2	Empowered Learner 1.1.b · 1.1.d Creative Communicator 1.6.a · 1.6.c	Canva Education; Google Earth (Voyager virtual tours); Green Screen; Seesaw — Visual Data; class LMS.
STEAM	Models and simulations; STEAM-integrated robotics builds; digital media and animation creation that combine art, design, and engineering.	K-2.CS.b.2 3-5.CS.b.1	Innovative Designer 1.4.a · 1.4.c Creative Communicator 1.6.b · 1.6.c	Seesaw — STEAM; Lego Education Spike; Green Screen; Canva Education.
Robotics	Hands-on robotics; predicting the outcomes of an algorithm through logical reasoning; iterative build-test-refine cycles, individually and in teams.	3-5.CT.b.3 3-5.CT.b.4	Innovative Designer 1.4.a · 1.4.b · 1.4.c Computational Thinker 1.5.d	Lego Education Spike (Chromebook web app + kits); Explore the World of Robots; Indi bots; Dashbots
Coding	Defining an algorithm as a sequence of steps; a three-part coding progression; understanding a program as a set of human-authored commands.	K-2.CT.b.1 · 3- 5.CT.b.1 K-2.CT.d.1	Computational Thinker 1.5.a · 1.5.c · 1.5.d	Kodable; Scratch Jr./Scratch — Creative Computing curriculum; code.org ; Seesaw — Code the World.
Computer Science	How networks link devices locally and globally; hardware and software; the role of technology in the community; comparing tasks suited to humans vs. computers.	K-2.CS.c.1 · K- 2.CS.b.2 3-5.CS.b.1	Empowered Learner 1.1.d Computational Thinker 1.5.a · 1.5.c	BrainPOP Jr./BrainPOP; Digital Technologies Hub curriculum and lessons.
Computational Thinking	The four pillars — algorithms, pattern recognition, abstraction, and decomposition; listing attributes of common objects; logical reasoning to predict outcomes.	K-2.CT.a.1 · K- 2.CT.b.1 3-5.CT.b.3	Computational Thinker 1.5.a · 1.5.b · 1.5.c · 1.5.d	Seesaw — Computational Thinking; Scratch; unplugged reasoning activities.

Notes. MA codes follow the Massachusetts DLCS Curriculum Framework (grade bands K-2 / 3-5; strands Computing and Society, Digital Tools and Collaboration, Computing Systems, Computational Thinking). ISTE codes refer to the ISTE Standards for Students — 1.1 Empowered Learner, 1.2 Digital Citizen, 1.3 Knowledge Constructor, 1.4 Innovative Designer, 1.5 Computational Thinker, 1.6 Creative Communicator, 1.7 Global Collaborator — with letters denoting sub-indicators. Third-party tools and curricula are listed as resources used in instruction; their content remains the property of the respective providers. Domains overlap by design, so a single lesson commonly advances several at once. Full scope, pacing, and assessment details available on request.