2026 CSTA PK–12
COMPUTER SCIENCE STANDARDS
Implementation Guidance for State Leaders

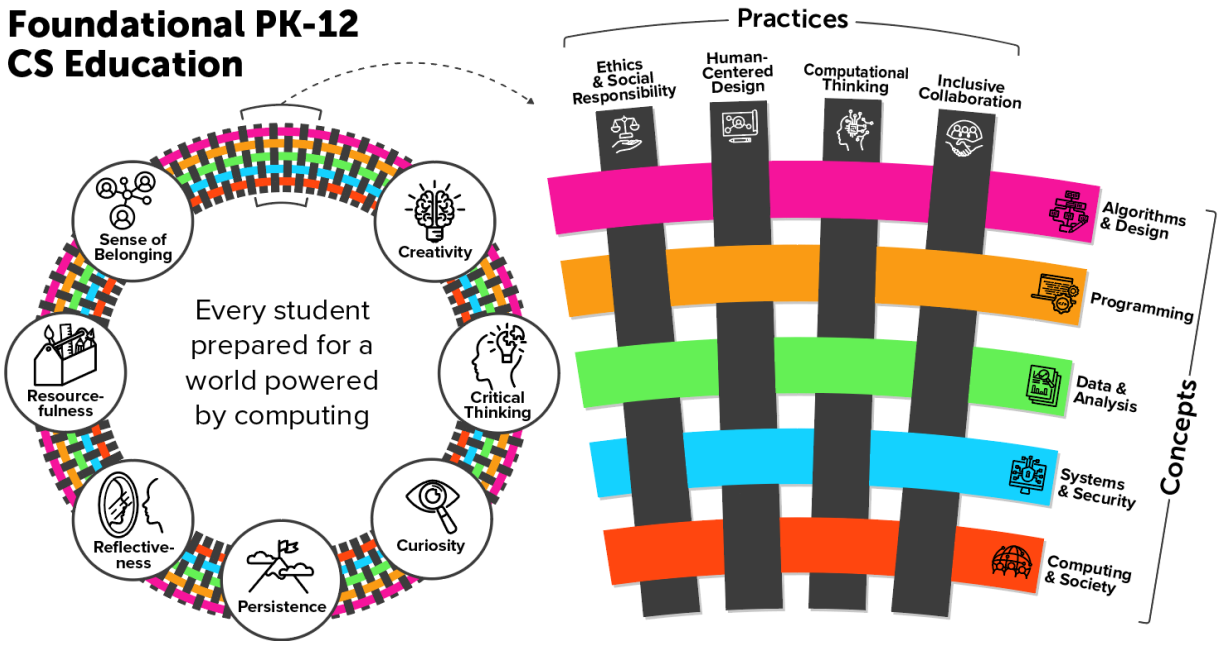
The 2026 CSTA PK-12 CS Standards

The CSTA Standards define the essential knowledge, skills, and dispositions students need to be prepared for a world powered by computing. They articulate coherent **learning progressions from pre-kindergarten through grade 12**, forming the foundation for rigorous and inclusive computer science education across diverse educational contexts. Written **for educators by educators**, the Standards are grounded in research and informed by classroom practice. They are designed to support **state and local adaptation** while promoting instructional coherence across systems, programs, and learning experiences.

Structure of the Standards

The revised Standards are organized around three interconnected elements: **concepts** (core knowledge), **practices** (crosscutting skills), and **dispositions** (habits of mind). Together, they reflect that computer science is not only about how technologies work, but also about how people design, build, and use computing to solve problems across disciplines.

The five concepts (Algorithms & Design, Programming, Data & Analysis, Systems & Security, and Computing & Society) are woven together with four categories of practices (Ethics & Social Responsibility, Human-Centered Design, Computational Thinking, and Inclusive Collaboration), reflecting that concepts and practices are integrated rather than taught in isolation. Surrounding this work are seven dispositions (creativity, critical thinking, curiosity, persistence, reflectiveness, resourcefulness, and sense of belonging) that support every student in becoming prepared for a world powered by computing.



 https://csteachers.org/pk12standards/

Key Features of the Standards

1. **Grounded in core values**: The Standards are equity-centered, community-generated, future-oriented, research-based, and flexible, designed to support multiple instructional approaches, including stand-alone and interdisciplinary learning, while connecting all students to postsecondary, career, and civic pathways.
2. **Vertically aligned by grade**: The Standards build coherent learning progressions, grade-level specific in elementary (PK–5) and organized by grade bands in middle school (grades 6–8) and high school (grades 9–12).
3. **AI, ethics, and other emerging priorities**: AI is a central focus, integrated across the Standards rather than taught in isolation. A strong emphasis on ethics and social responsibility ensures students engage with technology responsibly. Other elevated priorities include inclusive collaboration, human-centered design, career exploration, and the history of computing.
4. **Enhanced implementation supports**: Each standard is paired with implementation examples, interdisciplinary connections, and curated resources, accessible through a new interactive web display that lets users explore, customize, and download standards.
5. **High School Specialty Standards**: Once students have developed a strong foundation, Specialty Standards offer two levels of advanced, domain-specific study across six areas: Artificial Intelligence, Cybersecurity, Data Science, Game Development, Physical Computing, and Software Development. Additionally, X+CS standards guide the integration of foundational CS content into non-CS subjects such as journalism and biology.

Guidance for State Leaders

State leaders shape the conditions for high-quality computer science education at scale. States adopt and align to the 2026 CSTA PK–12 CS Standards to establish a **research-informed foundation** for CS education that supports coherent learning across grade levels, prepares students for a world powered by computing, and promotes **equitable access** to high-quality CS learning. The guidance below outlines key actions for adopting, interpreting, and implementing the Standards while preserving local flexibility in how implementation is carried out.

State Leadership Actions

1. Support Adoption and Transition

Adopting new standards raises questions about how they differ from previous versions and how quickly systems should transition. States can reduce confusion by providing clear guidance and well-paced support.

- **Provide crosswalks** that highlight major shifts from previous standards.
- **Communicate** the intent behind key changes.
- **Establish a phased implementation timeline** that gives districts time to align curriculum and professional learning.
- **Clarify** which elements of implementation are state-directed and which remain local decisions.

2. Promote Coherent CS Pathways

States can help move beyond isolated CS courses toward coherent PK–12 learning that builds over time by defining pathways directly or supporting district-led pathway design.

- **Define multiple pathways to CS learning**, including integrated, stand-alone, and blended models, through state course catalogs and pathway frameworks where applicable, or through guidance that supports district design.
- **Align state CTE standards with CSTA standards** and industry-recognized credentials to support seamless transitions to postsecondary and workforce opportunities.
- **Adopt or recommend the High School Specialty Standards** as the basis for state-approved advanced courses to design multi-course sequences by specialty area (e.g., AI, data science), while ensuring all students complete strong foundational CS learning first.

3. Build Alignment and Capacity

States play a critical role in helping educators interpret the Standards and ensuring alignment across systems that support implementation.

- **Provide tools and guidance** to help districts interpret standards and learning progressions, including boundary statements, implementation examples, interdisciplinary connections, and a glossary (all available in CSTA's interactive web display).
- **Align the Standards with curriculum guidance, educator preparation, and certification expectations**, and highlight connections to other state-adopted standards (e.g., math, science, ELA) to support integration.
- **Allocate funding for sustained professional learning** that helps educators apply the Standards, including AI, ethics, and emerging topics, and fund statewide coaching networks and professional learning communities to address CS teacher isolation.

4. Center Equity and Access in Implementation

Equity is foundational to the CSTA Standards. States play a decisive role in ensuring high-quality CS learning impacts every student across geography, demographics, ability, and prior experience.

- **Use state longitudinal data systems** to track disaggregated participation and outcomes, and act on disparities across student groups, regions, and school types.
- **Align state policy, standards, and graduation requirements** to ensure all students learn foundational CS education across grades PK–12, and address structural barriers such as restrictive prerequisites, gatekeeping practices, and resource gaps, including funding for implementation and model curricula.
- **Keep accessibility and inclusion at the forefront**, including culturally responsive practices, Universal Design for Learning, and support for students with disabilities and multilingual learners.
- **Invest in educator capacity in historically underserved communities** through state funding for CS teacher recruitment, retention, PD, and certification pathways.
- **Convene families and communities**, especially groups historically underrepresented in computing, as partners in access, awareness, and support.

Tools to Support Implementation

- **2017 → 2026 Crosswalk** – Compare the revised standards with the previous version.
- **Progressions Charts** – Visualize how concepts develop across grade levels.
- **Interactive Web Display** – Search, filter, explore progressions, and access supports (e.g., implementation examples, interdisciplinary connections, example lesson plans) with customizable, downloadable views.
- **Implementation Guidance** – Resources for state leaders, PK-12 administrators, & teachers, plus how to flexibly implement the Standards at each grade band.

Reflection Questions

- What state policies, guidance, or resources need to be updated or aligned to reflect the revised CSTA Standards?
- Where do districts need the most support (e.g., interpreting standards, aligning curriculum, building capacity)?
- How will the state support coherent PK–12 CS pathways rather than isolated experiences?
- What actions will expand equitable access across districts and student groups?

Next Steps and Partnership

Implementing the revised CSTA Standards is a multi-year, multi-partner effort. CSTA welcomes the opportunity to work alongside state leaders, supporting writing teams, providing context for stakeholders, and sharing the research and educator voices that shaped the revision.

Available CSTA Supports

- Presentations for state writing and policy teams (virtual or in-person)
- Summaries of the CSTA standards revision process
- Research that informed the standards development
- Planning, recruiting, advising, or providing technical support for standards writing
- Testimonials from specific roles (e.g., writing team members, technical writers, advisors)
- Supplementary resources

Interested in learning more? Contact: standards@csteachers.org

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