

Iowa Department of Education
Computer Science Professional Development Incentive Fund
Information Sheet
2020-21

Computer science is a new basic skill in an increasingly competitive, technology-driven economy. As a result, state and local leaders in recent years have raised expectations that students have more opportunities to learn computer science. Iowa's next step is to lay a strong computer science foundation in all elementary schools, and to build upon that foundation as students move through middle school and high school.

Computer science develops students' computational and critical thinking skills and shows them how to create, not simply use, new technologies. Computer science is understanding how and why technologies work, exploring whether and how technology could solve real-life problems, investigating procedures, creating solutions, and learning about computing systems, programming, data, networks, and the effects on society and the individual. This fundamental knowledge is needed to prepare students for the 21st century, regardless of their ultimate field of study or occupation.

[Senate File 274](#), signed into law in 2017, established the Computer Science Professional Development Incentive Fund (CSPDIF) with the intent to build the capacity of Iowa schools to provide high-quality computer science instruction. The Iowa Department of Education has more than \$800,000 to award to public school districts, accredited non-public schools, and collaboratives.

In the next round of CSPDIF awards for the 2020-21 school year, we are looking for innovative ideas and will select those that are most likely to prepare teachers to teach computer science within six to 12 months.

Our goals:

- Offer high-quality professional development to prepare Iowa teachers to teach computer science,
- Engage teachers who are new to computer science
- Encourage innovation, and
- Build a vibrant network of computer science teachers.

Examples of an innovative approach include CSforALL SCRIPT workshops and integrated classroom and work-based learning components.

Consider this: New legislation, [House File 2629](#), signed into law in June 2020, requires each public school district and accredited nonpublic school to develop and implement a K-12 computer science plan by July 1, 2022. The grant is an opportunity to begin thinking about how professional development will contribute to that plan. Professional development is critically important since the legislation also requires computer science instruction in at least one grade level in grades one through six, and in either seventh or eighth grade, beginning July 1, 2023. High schools must offer one semester of computer science beginning July 1, 2022.

Here are the ways two collaboratives used their awards:

- The 2018-19 NE Iowa Computer Science Collaborative offered Code.org's professional development for CS Fundamentals, CS Discoveries, and CS Principles using a cohort format during the spring and summer of 2019. Seventy-eight educators participated. Code.org and NewBoCo were selected as the professional development partners because the course offerings have proven alignment with Iowa's Computer Science Standards and the K-12 continuum allows for opportunities at all levels, which should foster increased student participation over time.

- The 2019-20 Great Prairie AEA grant focused on creating teacher leaders to teach computer science content and to support others in integrating computer science standards in grades K-8. Approximately 40 educators participated in the K-8 Computer Science Integration training sessions that included online resources, face-to-face professional development provided by NewBoCo, and on-site support from the GPAEA technology team. Twenty educators representing nine districts participated in the CS Discoveries Trainings to prepare them to teach middle school/ high school exploratory computer science.

Additional considerations as you prepare your application:

- How will you prepare your K-12 teachers to teach computer science?
- How will that preparation fit into your immediate and longer-term plans to integrate computer science in a cohesive way into the K-12 curriculum?
- How will you build a strong foundation in computer science early to give all students the confidence to study computer science in greater depth later, if that is where their interests lie?
- In K-8, will you integrate computer science instruction into other subjects, will you choose stand-alone instruction, or choose a combination of both?
- How could developing strong public-private partnerships with employers in your community enhance computer science instruction?
- How could Area Education Agencies assist with facilitating collaboration among school districts and nonpublic schools to expand participation in computer science professional development?
- The expected timeline for the CSPDIF for this school year:

October 12: Application opens on IowaGrants; Grant announcement; Guidance, application questions, and scoring matrix available on educateiowa.gov

November 9: Application closes at 5 p.m.

December 16: Awardees notified / Funds available

June 30, 2021: Spending window closes