Applicant: Clinton Community School District – SE Region

Email address:

sshepherd@clintonia.org

Name of Individual Submitting Application:

Sarah Shepherd

Executive Summary

In 500 words or less, summarize the school district's, non-public school system's or accredited, stand-alone non-public school's vision for your Computer Science is Elementary initiative.

The Clinton Community School district has a long tradition as an ever-evolving, forward thinking school district. The mission of our schools is to educate all students to their highest level of achievement through an engaging curriculum in a caring community. Our curriculum is a living, breathing, always changing document designed to challenge our students and prepare them for future success on whatever path they choose.

One of the final pieces of this curriculum is computer science education. Our students have been given many opportunities to use technology as a tool in their education, but have not, as of yet, been offered instruction in how that technology works or how to use it to create. Our students have been consumers of technology, but they need to be given the opportunity to become creators of technology.

Demographics

Points Awarded: / 10

10 points

What is the name of the district, system or stand-alone non-public school making the application?
Clinton Community Schools

What is the name of elementary school(s) that will participate in Computer Science is Elementary?
Whittier Elementary

What grades does the participant building(s) serve?
K-5

Provide the name, email address and phone number of the primary lead for the application.

Sarah Shepherd, sshepherd@clintonia.org, 563-357-6398

Provide the name, email address and phone number of the fiscal agent or business manager who will handle reimbursement if awarded.

Cindy McAleer, cmcaleer@clintonia.org, 563-243-9600 ext 25

In what STEM region is the district/system/stand-alone non-public school located? (https://iowastem.gov/regions)

Southeast STEM Region

Based on Student Reporting in Iowa (SRI) Oct. 1, 2018, reporting, what percentage of students in the participating elementary school(s) are eligible for free and reduced-price lunch?

51%

Based on SRI Oct. 1, 2018, reporting, what percentage of students in participating elementary school(s) are underrepresented populations in the field of computer science (African-American, Hispanic, American Indian/Alaskan, Native Hawaiian/Pacific Islander)?

Girls: 46%   Minority Groups: 24%

Goals and Measurements

Points Awarded: / 20

20 points

What are the measurable goals for the Computer Science is Elementary initiative in the district/system/stand-alone non-public school?

Create a computer science curriculum that both teachers and students will find engaging and purposeful with a focus on active learning, creativity and exploration as recommended by the Computer Science Teachers Association.

All Whittier students grades K-5 will be a part of that new computer science education instruction.

Expand our community partnerships to include computer science mentors and show examples of real life application.

Involve all stakeholders in the planning and implementation of this new curriculum, including community members, families and administration.

How do these goals tie to the larger district/system/stand-alone non-public school goals, mission, and vision?
While our school district does not have a specific, articulated goal that relates directly to computer science education, it is the mission of our district to educate all students to their highest level of achievement through an engaging curriculum. Computer Science plays an imperative part of this mission in making our students future ready and prepared for challenges and jobs that do not yet exist. Whittier Elementary's vision and goals support that mission. Our computer science curriculum will be rigorous and engaging. It will serve as a model for other schools in our district and will begin the important conversation about the future of computer science education in all of our schools.

How will the district/system/stand-alone non-public school measure the success of the plan using student data, with an emphasis on achievement and engagement?
At Whittier, nearly all decisions are based on student data. We use a model of pre-assessment and common formative assessments to gauge the progress of our students and the effectiveness of our instruction. It is our plan to use the same approach to measure the success of this program. All stakeholders will be given pre and post surveys to determine level of understanding, level of engagement and needs that should still be addressed. Students will take common formative assessments to give teachers the data needed to make decisions about instruction. We will use the same standards of success that we do in all curricular areas.

Plan

Points Awarded: / 40

40 points

Describe how the plan will be launched or built upon an existing computer science education in the proposed participating elementary school(s).

During the summer of 2019, a committee of teachers will do the work of creating our computer science education curriculum. This will be an ongoing process throughout the school year. A team consisting of one teacher from each grade level, K-5, will pilot the instruction of this new curriculum in the 19-20 school year. They will collaborate to determine areas in need of improvement as well as areas of success that can be built upon.

Impact   **Sub-Section Points Awarded: / 10**

What is the plan for computer science instruction by July 1, 2020?

By July 1, 2020 one-third of all students in grades K-5 will have received instruction in computer science as set out in our newly written curriculum. They will be able to productively use technology in all curricular areas as well as use it as a tool for communication and creativity outside of the traditional subject areas. By July 2021, all K-5 students will have received instruction in computer science.

Does the plan build on existing computer science instruction or launch a first-time initiative?

Currently there is no computer science instruction at any level in the Clinton Schools. Students are given many opportunities to use technology as a learning tool, but have not been given any structured instruction in computer science. The curriculum developed through the Computer Science is Elementary grant program will be a first-time initiative for our district.

Will computer science be integrated into other subjects or delivered as a stand-alone discipline?

It is our plan to initially integrate computer science into our math and science curricular areas with the longer term goal of integrating computer science into other subjects as our proficiency and experience develops.

Computer science will be integrated into other curricular areas. In the beginning, it will be integrated mostly into science and math, but will expand to other areas as well once we have more experience with it.

What grade level(s) of students and teachers will be included initially?

K - 5th

What is the plan for expansion to all students in all grades in your school?

In our first year of implementation, one section of each grade level, kindergarten through 5th, will be involved. By our second year, that will be extended to include all sections. By 2021, all of our students will have had computer science instruction.

Curriculum   **Sub-Section Points Awarded: / 10**

What is the plan to identify, revise or write high-quality computer science curriculum aligned to the Iowa Computer Science Standards, 21st Century Skills, Universal Constructs and career exploration?

By July 1, 2020, we will have put into place a comprehensive and engaging computer science curriculum that aligns with the recommendations of the CSTA, Computer Science Teachers Association. A team of teachers will use those recommendations to create a curriculum for Whittier that is comprehensive, engaging, and rooted in real world applications. This curriculum will be an evolving document with changes being made as we progress through its implementation. Looking at the data we collect, we will analyze the areas of the curriculum that need adjustments and make them as needed.

Curriculum will include collaboration with mentors from local businesses who will come in, communicate via Skype and other digital platforms to share their experiences in real world situations where technology is being used on a daily basis including a programmer from John Deere. This will give our students an opportunity to explore careers in computer science as well as learn the skills needed to be future ready.

Professional Learning   Sub-Section Points Awarded: / 10

What is the plan for professional learning in years one (fiscal year 2020) and two (fiscal year 2021), including participants, providers, timeline, instructional pedagogy, curriculum connections, alignment to Iowa standards and school community/employer partner connections?

In the first year of implementation, we will provide training for a small group of educators who have expressed an interest in piloting this new initiative. Training will include participation in technology conferences, AEA classes, and with district leaders in the area of technology use.

In the second year, the rest of our staff will join the initial cohort who piloted the first year. They will partner with those participants to learn from their experiences as well as participate in trainings provided by AEA and district leaders.

Community Engagement   Sub-Section Points Awarded: / 10

How will the community be engaged?

The community will be involved in many ways throughout the year. Through our partnership with the Clinton Public Library, we will offer opportunities to learn more about computer science through their summer programming. They will offer summer classes in computer science to build interest in upcoming learning at Whittier. Their classes will also give, not just Whittier students, but all interested community members, the opportunity to practice with programs and trained staff that can support their computer science learning at the library.

The community will also be invited to come to Whittier to see examples of student learning at evening events held during the school year. During Computer Science Education week, we will hold a computer science fair where families and community members can come and see projects students

have been working on, ask students questions, and try some hands on computer science activities for themselves. Community members will also be invited to participate in Hour of Code along with students and staff that week. Local businesses will be invited to have their own booths and information about how computer science and technology is used in their workplace available to visitors of the computer science fair.

Community members and business partners will be invited to come into classrooms both in person and digitally to serve as mentors to the students as they learn more about computer science and how it is used in businesses.

How will parents and a broader stakeholder group be involved in planning and implementation of the Computer Science is Elementary initiative?

We will get our message about computer science education out to our stakeholders through a series of meetings. We will begin by presenting our plan to local service organizations such as Rotary and Kiwanis. We will also talk to parents and family members at our Parent Teacher Association meetings. Through these presentations, it is our plan to create a committee of interested stakeholders who will serve as advisors in the planning and implementation of our initiative.

Who are or will be the community/employer partner(s) and what is the shared vision for engagement?

At Whittier, we know the value of partnering with our community and showing our students true, real-world collaboration. One way we have been doing that is through a partnership with our local public library. The Clinton Public Library and Whittier Elementary have a reciprocal relationship in that both parties work in each other's spaces to support the learning of our students. So far, that partnership has had a focus on literacy and Making. With the increased resources we would receive from Computer Science is Elementary, we could expand that collaboration to technology. Our public library has a very talented staff including an extremely creative children's director and and equally gifted technology coordinator. They bring a skill set that we do not have at Whittier and we help to build interest and participation in their programs and activities like their summer electronics camps and MakeLab. They have experience with everything from coding to 3D printing to augmented reality, all of which are areas we would love to be able to offer to our students. Our vision is to to expand on the areas where we already collaborate with CPL, and expand to offer our students a wide variety of engaging 21st century activities and skills.

We have also received a commitment from the Clinton Regional Development Corporation. This group will give us access to many local businesses and manufacturing companies where computer science plays an integral role in daily operations and production. The CRDC and the Clinton Public Library both share our vision for preparing our students for the future through computer science

education. They know, as we do, that our students will gain critical thinking, problem solving, and creativity skills from computer science education that will prepare them for future careers.

All applicants must have at least one community/business partner. Please include at least one signed letter of commitment (in PDF format) on employer letterhead from a community/business partner. Up to 10 employer letters may be added. This must be done in order for the application to be considered complete.
Clinton Public Library and Clinton Regional Development Center

Budget

Points Awarded: / 20

20 points
Please include the amount and a brief explanation of the use of funds per cost category not to exceed $50,000 over two years. Allowable expenditures may include the following categories:

Budget Category	Total Request	Year 1	Explanation of Funds	Year 2	Explanation of Funds
Professional Learning	$ 3,820.00	$ 2,820.00	K12 Computer Science Framework Books, ITEC Conference, Guest teacher compensation for conferences, Hotel/ Meals during conferences	$ 1,000.00	In district training, compensation for instructor & supplies
Curriculum Development	$ 7,000.00	$ 4,000.00	compensation for curriculum writing and 1 year subscription to Kodable.com	$ 3,000.00	compensation for curriculum writing and 1 year subscription to Kodable.com
Site Visits	$ -	$ -		$ -	
District Costs	$ 36,004.00	$ 35,434.00	iPad Pro 12.9 6 @ $949 each= $5694 iPad cases 6 @ $60= $360 Tech Tub for iPads= 325 HP Pavilion Convertible Laptop 15 @ $570 each= $8550 Copernicus Tech Tub2 Trolley $730 Hummingbird Classroom Kit $725 Raspberry Pi Starter Kit 10 @ $129 each= 1290 Green Screen & lighting Kit $85 Makerbot EDU Web Builder 3D printer & accessories $5283 2 Windows Mixed Reality Systems: Omen by HP laptop 17-AN188NR - 2 $1619 each= $3238 Hololens II 2- $3500 each= $7000 BeeBot Hive 2- $600 each= $1200 Wacom Bamboo Pen & Touch 3 @ $178 each= $534 Think Fun Robot Turtle Games 3 @ $25 each= $75 Playz My First Computer & Coding Kit 3 @ $35 each= $105 Kids First Coding & Robotics 3 @ $100 each=	$ -	
Staffing Support	$ -	$ -		$ -	
Other	$ 3,000.00	$ 1,500.00	Supplies for CSEW night and other events	$ 1,500.00	Supplies for CSEW night and other events
TOTAL:	$ 49,824.00	$ 43,754.00		$ 5,500.00	
TOTAL VERIFICATION:	$ 49,254.00				
(Formula Written to Sum totals from Year 1 and 2)					

Cost Sharing (may include in-kind or cash from partners or other education funding streams)
Anticipated cost share over the two-year funding period.

Year 1 anticipated cost share (in dollars). Please provide a brief explanation.

Year 2 anticipated cost share (in dollars). Please provide a brief explanation.

The expectation for the Computer Science is Elementary award is that the plan uses primarily existing school revenue sources to execute a plan. After year two of the award, what is the plan for sustainability using existing or any additional funding sources?

Funding for the continuation of this initiative will come from district curriculum funds, PTA budget and funds from the district's educational foundation.

Computer Science is Elementary Model Network

Points Awarded: / 10

10 points

To be eligible for the award, participation in the Computer Science is Elementary Model Network is necessary. By checking this box, the district/system/stand-alone non-public school is willing to participate in a Computer Science is Elementary Model Network including, but not limited to, hosting visits and sharing best practices, challenges, opportunities and successes with colleagues across the state.

I agree

March 27, 2019

From: Erin M. Cole, President/CEO, Clinton Regional Development Corporation

To: Brian Kenney, Principal, Whittier Elementary School

Subject: Letter of Commitment for "Computer Science is Elementary" Application
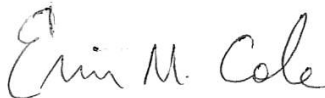
Dear Principal Kenney,

As you may know, the Clinton Regional Development Corporation (CRDC) is a non-profit economic development organization serving Clinton, IA since 1953. Our investor base includes dozens of businesses, from manufacturing facilities to healthcare providers. One of our key priorities is facilitating workforce development opportunities within our community.

The CRDC acts as a conduit between local employers and the Clinton Community School District. Together, we strive to identify and implement innovative new workforce development initiatives. For example, in 2018, the CRDC organized four tours of local manufacturing facilities to introduce high school students and their parents to the wide range of jobs available locally. In all cases, this was the students' first introduction to manufacturing jobs and the high-tech nature of what manufacturing is in the 21st Century. Due to the popularity of the program, the CRDC will organize additional tours in 2019.

Because of our workforce initiatives, we know that computer science education for children is critically important. Therefore, the CRDC strongly supports Whittier Elementary's effort to bring the "Computer Science is Elementary" program to Clinton, IA. If the grant is awarded, then the CRDC commits to leveraging its relationships with local employers to participate in and further support this effort. We can offer meeting space, event promotion, direct connections with local employers and public relations assistance at no cost.

Thank you for your vision and initiative in applying for this grant, we look forward to working with you. Please contact me with any questions at ecole@clintondevelopment.com or (563) 242-4536.

Sincerely,

Erin M. Cole

Erin M. Cole, CGBP
President/CEO

March 25, 2019

Principal Brian Kenney
Whittier Elementary School
1310 2nd Avenue South
Clinton, Iowa 52732

Re: Letter of Commitment to Whittier Elementary School and the Computer Science is Elementary Initiative in Clinton, Iowa

Dear Principal Kenney,

The Clinton Public Library is pleased to partner with Whittier Elementary School for the Computer Science is Elementary grant program. This grant would be a catalyst for our community, bringing necessary computer science skills to our kids and preparing them for jobs that as yet may not even exist.

Over the past year, the Clinton Public Library's Youth Services Librarian and Technology Coordinator have worked closely with Whittier Elementary School, providing support to STEM curriculum and facilitating workshops on 3D modeling, 3D printing, and more.

The Clinton Public Library will commit to the Computer Science is Elementary project by the involvement of our Youth Services Librarian and Technology Coordinator as well as participating in the planning and implementation of the program and getting community buy-in.

In closing, I would say that I'm proud to be a part of this project and partner with Whittier Elementary School in this way.

All my very best,

Gabriella Torres
Assistant Director
Youth Services Librarian

Reviewer Name:

Reviewer Signature: **Total Points Awarded:**   /100