Dr. James F. Lane
Superintendent of Public Instruction
Virginia Department of Education
P.O. Box 2120
Richmond, VA 23218

The Honorable Atif Qarni
Secretary of Education
P.O. Box 1475
Richmond, VA 23218

The Honorable L. Louise Lucas
President *Pro Tempore,* Senate of Virginia
P.O. Box 700
Portsmouth, VA 23705

The Honorable Rosalyn Tyler
Chairwoman, House Education Committee
25359 Blue Star Highway
Jarratt, VA 23867

October 1, 2021

Superintendent Lane, Secretary Qarni, Senator Lucas, and Chairwoman Tyler:

Pursuant to the budget of the Commonwealth of Virginia, "CodeVA shall report, no later than October 1, each year to the Chairmen of the House Education and Senate Education & Health Committees, Secretary of Education and the Superintendent of Public Instruction on its activities in the previous year to support computer science teacher training and curriculum development, including on collaboration with other stakeholders to avoid duplication of efforts."

Please see enclosed for our annual report.

Thank you.

Respectfully,

Chris Dovi
Executive Director, CodeVA

Cc: The Honorable Luke Torian, Chairman, House Appropriations Committee
The Honorable Janet Howell, Chairwoman, Senate Finance and Appropriations Committee

CodeVA 2020-2021 State Report

[CodeVA 2020-2021 State Report](#)

CodeVA shall report, no later than October 1, each year to the Chairmen of the House Education and Senate Education & Health Committees, Secretary of Education and the Superintendent of Public Instruction on its activities in the previous 2020-2021 to support computer science teacher training and curriculum development, including on collaboration with other stakeholders to avoid duplication of efforts.

CodeVA is a state-funded, Virginia-based nonprofit that partners with schools, parents, and communities to bring equitable computer science education to all of Virginia's students. All of CodeVA's programs, services and curricular resources are provided at no cost to Virginia public school divisions and teachers, with a focus on creating equitable access to the resources that school divisions need to implement the Virginia Computer Science Standards of Learning.. Founded in 2013 as a response to a dual critical shortage of computer science educators and computer science workforce, CodeVA's work with students, parents, teachers, school districts, industry partners and policymakers is statewide in scope and impact. CodeVA's objectives are to train Virginia's educators in how to teach computer science and computational thinking, and to broaden participation among minoritized students and underrepresented groups in STEM+C (Science, Technology, Engineering, Mathematics and Computer Science). Demand from Virginia's various industries reliant on computer science is for increased participation among females, as well as Black and Latino students. CodeVA advances these goals through a multifaceted approach including public advocacy and awareness, funded research programs, public educator training programs and curriculum development, and direct student programs.

Virginia has thus far maintained its leadership in policy and implementation of K-12 CS - an important distinction and accomplishment nationally, considering the growing competitiveness among states to attract high-tech employers and entrepreneurs. In 2018, partly on the strength of its K-12 CS commitment, as stated in the Virginia Computer Science

Standards of Learning (law adopted in 2016), Virginia became Amazon's choice for its HQ2. The tech giant is not alone in expressing a keen interest in early workforce development and CS literacy to Virginia government and economic development leaders, as Microsoft, Facebook, and other technology leaders seek to add data centers and hubs in the state because of the state's investment in computer science education. CodeVA's mission is to foster a sustainable and effective computer science educator ecosystem within Virginia's schools, by providing professional development and coaching to teachers statewide. Our work continues to grow and reach new participants, despite a year of unprecedented challenges created by the continuing global pandemic and its many consequences for public educators.

During the 2020 - 2021 school year, to adapt to evolving Covid-19 restrictions, CodeVA re-platformed 1,200 hours of educator-facing content instruction from in-person to online to continue to provide equitable access to computer science education for educators statewide. Replatforming professional learning online necessitated hundreds of more hours of faculty-facing content and instruction to make sure all of CodeVA's faculty was brought up to speed on effective online delivery of planned professional development. This switch to a virtual environment allowed for the expansion of asynchronous learning opportunities where educators could work both collaboratively and on their own at their discretion. Virtual classroom environments also allowed CodeVA to offer a wider array of professional learning opportunities in response to teacher requests for more hands-on coding experience and understanding of how to blend and integrate the Virginia Computer Science SOL's across content areas.

2020-2021 Professional Development

During the winter and spring, CodeVA continued to expand and enhance our facilitator and apprentice faculty, composed of a diverse group of Virginia educators. The CodeVA training faculty is unique nationally. It consists of public school teachers from across the state who apply to the program after attending and completing training sessions. Acceptance is subject to a merit-based application process that applies a rubric to, submission of portfolio work and a skills-based assessment, and that includes a tiered interview process.. The process emphasizes building a team of local experts across Virginia. Once accepted, they complete an apprenticeship that includes both a practicum and intensive training in

computer science and coding, pedagogy and adult learning, and Virginia's computer science standards. Underpinning the entire program is a deep concentration on equity and inclusion, both in education and in computer science fields. The faculty is a diverse team, and they reflect the diversity of schools across the state. CodeVA now has faculty trained in all of the state's eight superintendents regions. This supports the program's goal of locally responsive instruction, and reduces program costs.

The adjunct nature of CodeVA's faculty allows us to expand and contract staffing to meet both seasonal professional development needs, as well as to control for changes in levels of state, federal and corporate funding support that undergird these programs. This investment also ensures that the school divisions where faculty work full-time have highly skilled people in-house that can help with local professional learning, curriculum work and system-level planning without the risk and expense of contracting with external providers.

We currently have 45 active faculty members, 27 of whom are cross-trained in multiple programs. This year, 10 facilitator apprentices completed CodeVA's rigorous certification pathway to become full facilitators. Additionally, we onboarded 10 new apprentices to the facilitator staff. These facilitators and apprentices are Virginia public school educators, recruited from every superintendent region to ensure that professional trainer capacity is spread statewide, and is maintained as a local as well as state resource. CodeVA's model for recruiting, evaluating and apprenticing its faculty members relies on a graded rubric utilizing four domains of focus to ensure qualified and quality instructors: knowledge of computer science and adult learning; professional development. session quality; collaboration; and professionalism. This model for facilitator recruitment developed in Virginia is becoming a copied model in other states similarly expanding their CS teacher training initiatives. All CodeVA faculty are Virginia public school classroom teachers, and this criterion is also essential to the training model, in which current Virginia classroom teachers are the audience. National research and best practices, as well as CodeVA's own experience, has proven that adult teacher professional learning works best when the instructor is a peer with practical knowledge, in addition to the specialized content knowledge in CS provided through CodeVA.

Leveraging our successes in online instruction and continuing the necessary safety

precautions in the Commonwealth in response to COVID-19, CodeVA provided all professional development sessions via an improved and innovative online delivery format again in 2021. Keeping the integrity of the content and delivery structures from 2020, including synchronous and asynchronous training sessions, we also created time blocks for a "lunch and learn" series for participants from all training sessions to join in and learn from partner organizations, industry leaders, VDOE and CodeVA staff. New for this summer, along with the live training sessions, CodeVA has created an online platform called CodeVA Connect to support teachers through Professional Learning Communities (PLC) and a Professional Learning Series (PLS). The platform, developed by leveraging and expanding a resource funded through a National Science Foundation research grant awarded to CodeVA last year, will provide additional opportunities for continued learning, to demonstrate best practices in follow-up professional development, and has been used to create Professional Learning Community networks to build a sense of community across the state and within cohorts formed through past and recent summer training sessions. Utilizing this platform, CodeVA faculty will continue to provide a variety of learning and connection opportunities throughout the year.

Additionally, several new professional development courses were introduced this summer in response to teacher needs and requests. CodeVA provided new opportunities to build programming knowledge through the following courses: Programming in Scratch I and II; Programming in Python I and II; HS – Programming using Java; MS CS Starter Pack, (after positive feedback from the K5 Starter Pack introduced in 2020); and Middle School/High School Counselor Training. The Counselor Training supports counselors in helping students choose Computer Science courses and in working with teachers to overcome barriers to course implementation, an area of critical need, as CS high school pathways course offerings statewide continue to face challenges created by teacher shortages, especially in math and business education, and a lack of CS-endorsed teachers due to a lack of preservice programs offering this endorsement, teacher licensure requirements and how CS courses fit into already packed diploma requirements. In response CodeVA is piloting a program in 21-22 to support licencing more computer science teachers.As described in the Effectiveness section of this report, participant feedback on all programs has been extremely positive, with teachers expressing statistically significant increases in CS self-efficacy and confidence.

Attendance

CodeVA delivered over **10,000** hours of professional development training to **1,657** educators from **195** schools and organizations in over **50** separate professional development sessions from April through July, with an average 62% attendance rate (attendance/registrations). Of the participating schools this summer, 112 are designated Title 1 or have a student population greater than 40% who are eligible to receive Free/Reduced Lunch. These Title 1 or Free/Reduced Lunch schools make up 65% of the 250 educators and 58% of the 195 public schools with educators who attended summer 2021 PD.

The map in Figure 1 illustrates the Virginia public schools with teachers who participated in CodeVA's 2020-2021 virtual professional development. This is an interactive Google Map that may be accessed here.
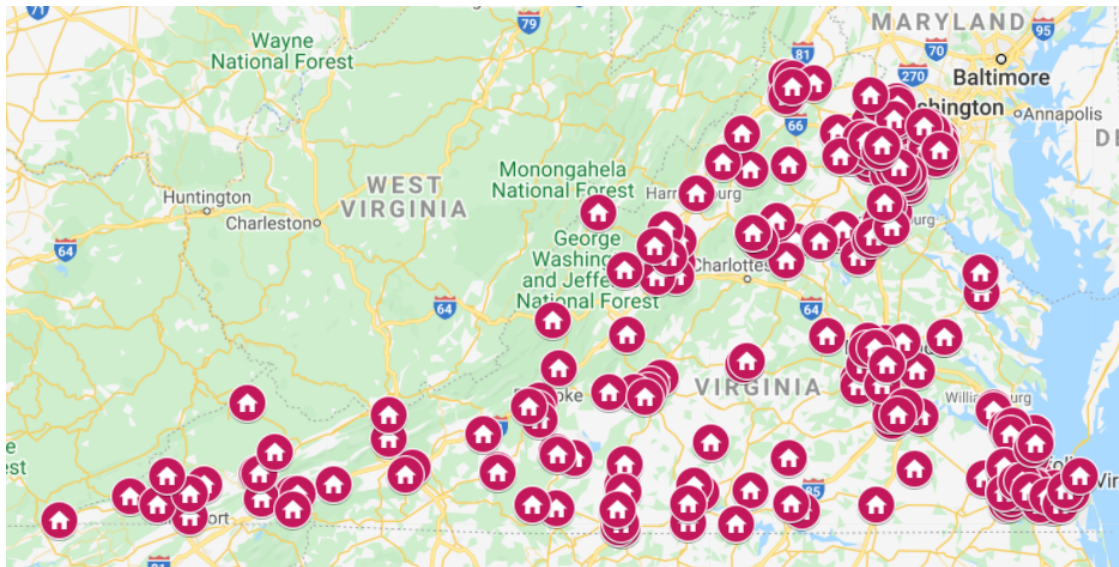
Figure 1: Schools and/or divisions with teachers participating in CodeVA Professional Development.

Figure 2 shows the CodeVA 2020-2021 teacher attendance by Region. Region 4 - Northern Virginia had the most participation with 31%, followed by Region 2 - Tidewater (23%), Region 5 - Valley (10%), Region 1 - Central Virginia (10%), Region 8 - Southside (9%), Region 6 - Western Virginia (7%), Region 7 - Southwest (5%), and Region 3 - Northern Neck (3%).
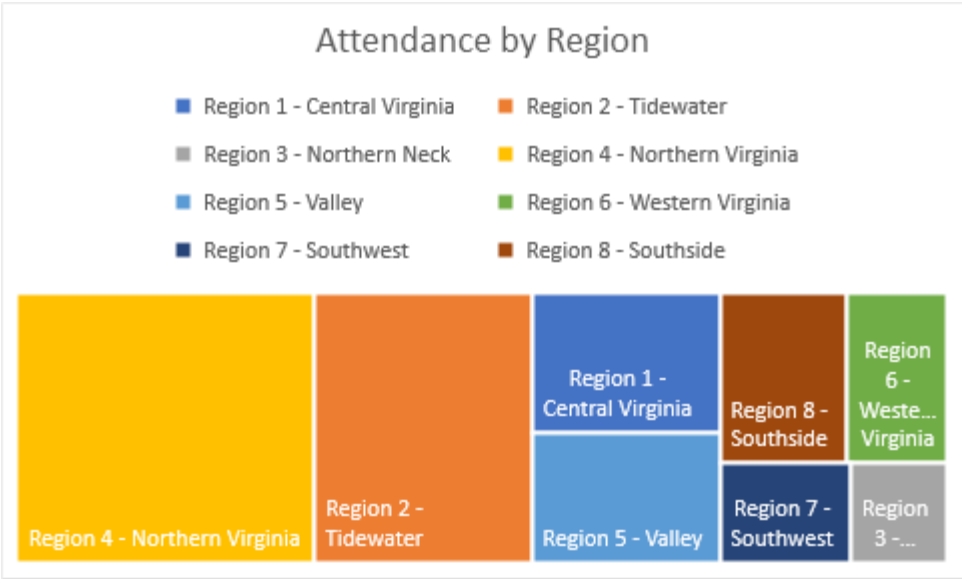
Attendance by Region

- Region 1 - Central Virginia
- Region 2 - Tidewater
- Region 3 - Northern Neck
- Region 4 - Northern Virginia
- Region 5 - Valley
- Region 6 - Western Virginia
- Region 7 - Southwest
- Region 8 - Southside

Region 4 - Northern Virginia | Region 2 - Tidewater | Region 1 - Central Virginia | Region 5 - Valley | Region 8 - Southside | Region 7 - Southwest | Region 3 -... | Region 6 - Weste... Virginia

Figure 2: CodeVA 2020-2021 Attendance by Region

Figure 3 breaks down professional development attendance by grade level and type of training. During the 2020-2021 year, the majority of participants attended middle school sessions, followed by elementary, programming-focused, and high school levels.
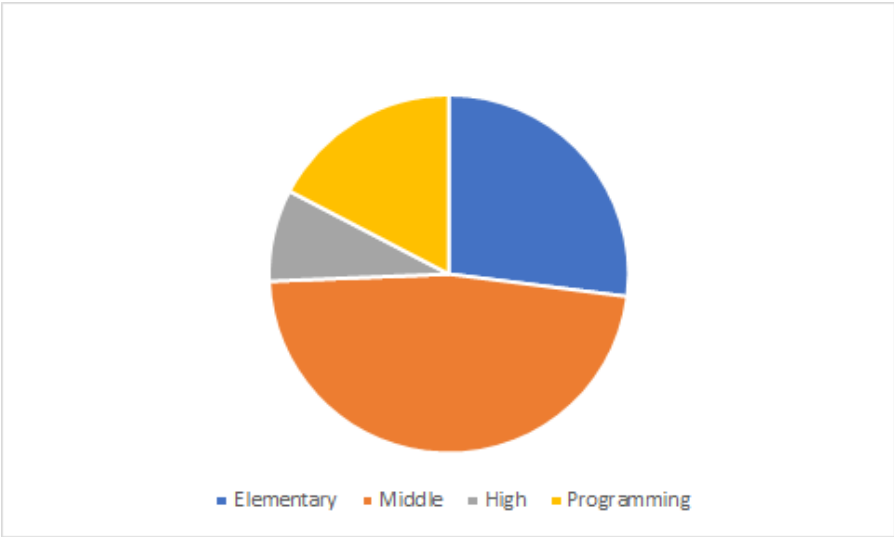
- Elementary
- Middle
- High
- Programming

Figure 3: 2020-2021 attendance by course grade-level/type

Summer Professional Development Sessions

CodeVA delivered more than 50 professional development sessions during the

summer of 2021, The specific programs CodeVA delivered virtually are listed below.

Elementary School Programs

- Elementary Coaches Academy
- K5 Launching Computer Science
- K5 Computer Science Integration
- Virginia Computer Science Standards of Learning (SOL) Deep Dives
- K5 CS Starter Pack
- CS First

Middle School Programs (MS)

- Middle School Coaches Academy
- Middle School Elective (Computer Science Discoveries)
- Project GUTS
- Middle School Computer Science Integration
- Middle School Launching CS*

High School (HS)

- AP Computer Science Principles
- Computer Science Foundations (Exploring Computer Science)
- HS - Programming using Java*

Programming

- Programming in Scratch
- Programming in Scratch II*
- Programming in Python
- Programming in Python II*

Denotes new course

In addition to the courses listed above, CodeVA delivered two newly designed professional development sessions associated with its recently funded National Science Foundation research grants. The first was a middle school course focused on computer science and

social studies integration, and the second was an elementary course on computer science integration across content areas through the lens of culturally relevant teaching.

Content

"I am impressed with the quality and organization of the materials" - educator participant in post-program survey

As part of CodeVA's continuing program evaluation, participants were asked to rate various aspects of the training: overall rating; amount of content covered; content rigor; session pacing; and required workload. Because this year's training was delivered in a new format, participants were also asked to rate the online experience. Participants responded to statements on a Likert scale from one to five, where five represented the strongest agreement and one represented the strongest disagreement. Across nearly every measure, CodeVA received an average of at least four out of five. See Table 1 below for results.

Table 1. Summer 2021 Survey Results

Question	Average across programs (1=strongly disagree; 5=strongly agree)
Online Experience	
I found online PD just as informative as in-person PD.	**4.32**
This PD session met my needs as a teacher-learner.	**4.19**
I felt a relationship with other participants	**4.21**
I felt part of the learning community	**4.30**
I felt a relationship with my facilitator	**4.24**
I am satisfied with my interaction with my peers and facilitator.	**4.33**

I found the instructional methods (e.g., collaborative google slides, icebreakers, group protocols, reflections) effective.	**4.30**

I am likely to attend an in-person CodeVA session in the future	**3.98**
I am likely to use the strategies, resources, curriculum learned about in the session this upcoming 2020-2021	**4.42**
CodeVA Experience	
Overall	**4.48**
Amount of content covered	**4.43**
Content rigor	**4.41**
Pacing of session	**4.27**
Workload	**4.34**

Delivery

"This is the best training I have attended in years! The instructors are knowledgeable about the content" - educator participant

Participants were also asked to rate facilitator performance in the following categories: knowledge of content; delivery of content; and preparedness. Respondents rated facilitators on a scale of one to five stars, where five stars is the highest rating, and one star is the lowest rating. Facilitators received an average of at least 4.5 out of five stars on every measure and the average response to whether respondents were likely to recommend CodeVA professional development was 4.53 out of 5.

Table 2. Facilitator Ratings

Question	Average rating across programs (1=lowest; 5=highest)
Facilitators	
Knowledge of content	**4.66**

|	
Delivery of content	**4.57**
Preparedness	**4.60**
How likely are you to recommend CodeVA Training to someone (1=not likely; 5=very likely)	**4.53**

Effectiveness

One of the primary goals of CodeVA's computer science professional development is to engage and empower educators who may have little or no prior computer science experience. To evaluate how the summer professional development accomplished that goal, pre- and post-training surveys focused on self-efficacy and understanding of content were administered to participants. Respondents reported agreement or disagreement with statements such as "I understand what Computer Science is" and "I am familiar with teaching strategies that are effective at my grade level for teaching computer science." Results showed statistically significant increases in almost every measure across all programs. For detailed analysis, please see the [Summer 2021 Professional Development Report](#).

Amplifying Impact

With continued funding from Amazon, CodeVA piloted the **CS Ready Schools** program, designed and developed in-house at CodeVA. CS Ready is CodeVA's program to facilitate educator professional learning with a formal school-specific approach that includes school and community leaders. CS Ready is a three-year program, with 19 schools currently representing diverse localities in Virginia during this pilot year. Participating schools have a

school population of at least 50% students eligible to receive free and reduced lunch, or are designated as a Title 1 school. This program supports the needs outlined by the VDOE by creating a sustainable ecosystem of Computer Science education for each participating school, and ultimately each school division. CodeVA plans to accomplish division-level impact by providing teams with iterative metrics and toolkits designed to empower their schools and divisions to utilize the tools independently beyond the initial support and coaching from CodeVA. CS Ready is designed to support and empower teachers, administrators, and other community stakeholders to implement computer science education across grade levels so that every student has equal access to this foundational literacy.
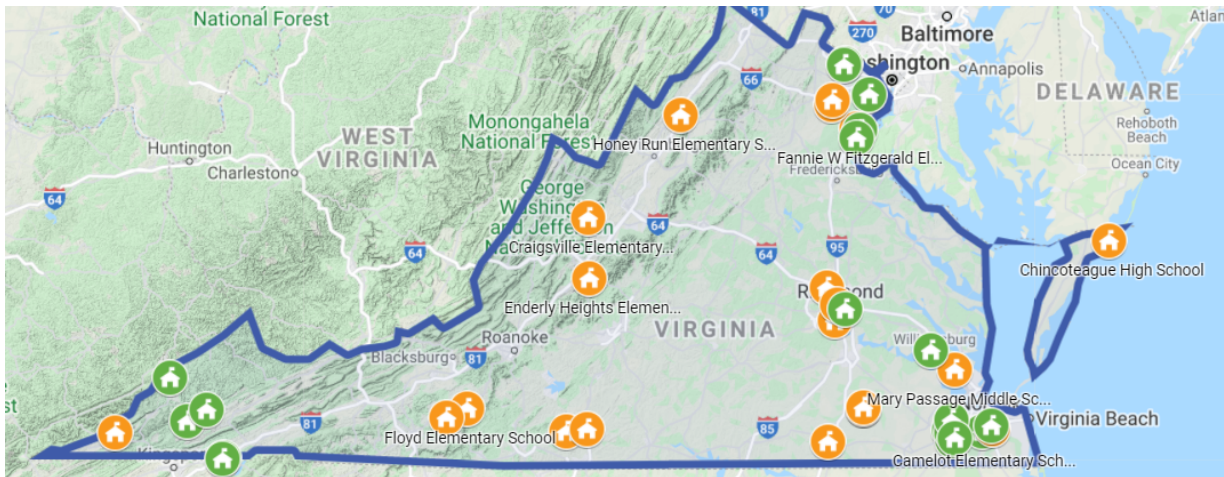
Interactive Map

Why a Strategic Plan? CodeVA offers free curriculum and professional learning across Virginia. This means teachers can opt in to training and explore computer science for their classrooms. After seven years of conducting professional learning sessions we know these teachers often struggle to implement computer science instruction without the support of school level planning by leadership. This means that even with the availability of high-quality teacher professional development in the subject, many students continue to not experience cohesive computer science instruction year to year, if at all. This is especially critical in high-needs schools. The CS Ready project creates a context for teacher professional learning that moves from individual teachers struggling to find time to implement computer science to a school wide initiative with community and administrative support.

CS Ready currently supports high-needs schools as they work to integrate digital workforce skills, including the mandated computer science curriculum into their K-12 classes. Once the program exits its pilot phase, CS Ready will become available to all Virginia schools. The work begins with school leaders forming a school impact team and participating in professional learning activities that guide understanding of computer science, the details of the computer science mandate in Virginia, and why this computer science integration is vitally important for their school community. This sets the foundation for the school to ensure that all students have equal access to high-quality computer science instruction. School impact teams are 5 - 7 teachers, administrators and other school leaders who meet monthly with CodeVA staff and facilitators. Each participant averages 36 hours of workshops and individual study over those nine months, all with the goal of learning how to effectively implement computer science courses and integration into their individual schools. The program wraps CodeVA's existing free professional learning and curriculum materials with real-time coaching and support from CodeVA staff. By providing support and guidance to schools when they need it, this program fosters the development of a computer science culture as a part of a school's learning community.

CodeVA's CS Ready program combines strategic planning for schools with ongoing support for teachers and school leaders to integrate the mandated Computer Science Standards of Learning into their K-12 classes. Outcome goals include adding middle and high school electives directly related to industry standard certification programs, potential internships, even eventual dual enrollment opportunities, and working with teachers, school administrators and local business representatives to make each school's program relevant to its local economy and workforce needs. Other outcomes of the program include convening local impact teams of educators and connecting them across school divisions to have a regional network of computer science teachers and administrators.
(CS Ready pilot Data Report Results *)

CS Ready is designed to address the gap between professional development for individual teachers and the school supports needed to implement real change. The program includes teacher training throughout the year, but with additional resources to support that teacher's school, and work with the school administrators and other stakeholders to help successfully

implement these big changes that under-resourced schools cannot undertake without support. This leads to educational and economic inequity within school divisions, where some schools are unable or unwilling to implement CS curriculum. Teachers in under-resourced divisions rarely have what they need to implement structural change, and students are often left without the opportunity to learn the digital literacy and workforce development skills necessary for STEM careers. CodeVA has the goal of working with 50 schools during the 2021-2022 school year, with a full scale of 700 schools in the 2022-2023 school year, all as part of its mission to help every school achieve equitable access to computer science for its students.

In order to deepen collective understanding around student and teacher learning of computer science, CodeVA currently is recipient of or participant in several national research grants. These include:

- **Reaching Across the Hallway.** CodeVA is the lead research partner in an effort with TERC in Cambridge, MA and the University of South Florida to explore the integration of computer science into middle school social studies and history classes in rural districts. Funded by the National Science Foundation (NSF) (#2010256).
- **CS FAB.** In partnership with the University of Virginia, Virginia Commonwealth University, Petersburg City Public Schools, and Chesterfield County Public Schools, CodeVA is the lead researcher in the development of a toolkit for grades 3-5 educators to help integrate both computer science and culturally relevant teaching across content areas. Funded by the NSF (#2031258).
- **Advancing Rural Computer Science** (ARCS; Old Dominion University) and **Metrics** (Winchester Public Schools) partner with CodeVA to deliver professional development as integral parts of their research projects. Funded by the US Department of Education.
- **Everyday AI**. A partnership with Massachusetts Institute of Technology, CodeVA is supporting investigation of artificial intelligence instruction integration in Richmond Public Schools middle school science classrooms and out-of-school programs. Funded by the NSF (#2048746).
- **Preparing K-5 Teachers to Integrate the Computer Science Standards of Learning in Inclusive Classrooms to Support Students with High Incidence Disabilities.** In

partnership with George Mason University, this NSF CS for All grant explores implementing computer science at the elementary levels for students with high incidences of learning disabilities (#1837380).

- **Project GUTS (Growing Up Thinking Scientifically)**, in partnership with Massachusetts Institute of Technology, investigates methods of teaching computer science in middle school science classrooms.

- **CHOICE**, or Professional Learning in Choice Communities, is a federally funded research grant awarded to Virginia Ed Strategies to provide enhanced professional development opportunities and PLCs for STEM+C teachers primarily from rural divisions within Virginia. CodeVA is providing expertise and consulting on how to implement computer science professional development. Funded by the US Department of Education.

In addition to the nationally awarded grant projects listed above, CodeVA participates in many state-funded projects to support quality computer science professional development to educators across the Commonwealth of Virginia. These grants not only expand the understanding of best practices in teaching computer science and inform our program design, but also bring funding to Virginia that supports teachers and students across the state. In addition to providing both logistical and material support to many of the VDOE's locally awarded Advancing Computer Science Education grants, CodeVA is a co-recipient of one in collaboration with VCU and CodeRVA Regional High School.

To support the statewide implementation of computer science education, CodeVA engages in a robust variety of other activities to build engagement, interest, and community support. In 2020, in partnership with the Virginia Department of Education, CodeVA developed and distributed the Game of STEM, a visual resource for school counselors and educators to share with high school students to illustrate the wide range of computer science and CS-adjacent careers available to them. In December 2020, CodeVA hosted its first virtual CS Ed Week Launch program (previously held in person at the Science Museum, with an average attendance of 600 Richmond Public Schools students), with a total reach of nearly 16,000 students, educators, and families across the Commonwealth through virtual workshops and online video content.

Partnerships play an integral role in CodeVA's mission to create equitable computer science opportunities for students statewide. CodeVA has continued to work with Virtual Virginia, to create online computer science courses, including curricula, and has been supporting GO Virginia projects by providing educator professional development services in both Southwest Virginia and Loudoun/Chesapeake. In spring 2021, CodeVA announced a partnership with the VDOE focused on collaboration to create new data science K-12 classroom resources, to promote resources created by the VDOE, and to integrate this data science focus into CodeVA's professional development program statewide in support of the integration of data science that are a part of the new Mathematics Standards of Learning. CodeVA is working with the national consortium Data Science for Everyone to increase awareness and engagement around data science in K-12 education. Other national partners include, but are not limited to, Data Science for Everyone, Code.org, ECEP Alliance, CSTA and CSforALL. CodeVA is currently working on a teacher microcredential pilot with Virtual Virginia and Virginia Association for Supervision and Curriculum Development, with the goal of increasing teacher access to credentials in computer science, as well as the increased career opportunities that result in professional credentialing. All of CodeVA's state and national partnerships, advocacy work, and staff support on Virginia Department of Education teams is part of its larger goal to help build a computer science ecosystem within Virginia.

Conclusion and Summary

Despite the continued impact of COVID-19, bringing our summer participant number down following widespread virtual fatigue, CodeVA's 2021 professional development was successful in its delivery of a breadth of rigorous computer science content to K-12 educators of all grade levels from diverse regions of Virginia. CodeVA's new year-long availability of professional development provided support to 1,657 teachers during the reporting period defined in this report, and these educators continue to be supported by CodeVA's professional learning communities. Represented in those participant numbers are teachers from all eight superintendent regions of the state.

CodeVA's 2020-2021 teacher cohort received more than 10,000 hours of PD ranging from integrating CS into elementary instruction, to implementing year-long high school courses, to deepening content skills with our programming courses. Respondents rated CodeVA highly on both the content and delivery of materials. They also found the training effective in

imparting computer science content knowledge, familiarizing participants with the newly adopted VDOE Computer Science SOLs, and sharing effective, grade-level appropriate teaching strategies. Moving forward, CodeVA is poised to respond to school division requests for training utilizing the cohort model as well as a new "just in time" model to offer customized one-day or multiple-day professional development opportunities in person and online, for any school that requests it.

Parallel to the state-funded training, CodeVA utilizes grant awards to develop research and practitioner partnerships with Virginia universities, agencies, and school divisions in order to increase opportunities for teacher professional development and to develop rubrics and resources. These resources will serve as a toolset and foundation for a scaled statewide program. The outcomes of these grant-funded programs are intended to provide the state and school divisions with curricula, resources, and a metrics-driven planning tool to help guide the implementation of the computer science K-12 mandate.

CodeVA's advocacy and policy work for Virginia also continues to grow. This year we are working with the Department of Education on a pilot based on CodeVA's recently passed legislation around micro credentials for STEM+C teacher add-on endorsements. CodeVA and the VDOE also recently entered into a multi-year collaboration, with CodeVA developing materials to integrate computer science into math or data science classes, with curriculum for professional learning and classroom implementation. While work remains to implement equitable access to K-12 Computer Science education throughout the Commonwealth, CodeVA's educator programs, which owe their availability and success to state support and collaboration, are building a strong foundation to support Virginia's students, educators, and future workforce within the Digital Dominion.

Appendix A - Attendance update

Summer 2020-2021 Professional Development session registration and attendance

Training Name	Start Date	Total Hours	Registered	Attended	Show Rate
CoderZ Webinar	28-May-21	7	11	7	64%

CSD - Stafford Cohort	16-Oct-20	184	7	5	71%
CSTA Blue Ridge Computer Science Education Series - Impacts of Computing	7-Dec-20	0	11	0	0%
CSTA SOVA Finch Programming	9-Feb-21	92	20	13	65%
HS - AP CS Principles	19-Jul-21	504	19	13	68%
HS - AP CS Principles Follow-Up 1	13-Oct-20	0	2	0	0%
HS - AP CS Principles Follow-Up 1	17-Oct-20	0	6	0	0%
HS - AP CS Principles Follow-Up 1	28-Oct-20	0	4	0	0%
HS - AP CS Principles Follow-Up 2	14-Nov-20	0	3	0	0%
HS - CS Foundations - ECS	21-Jul-21	840	32	21	66%
HS - CS Foundations - ECS Follow-Up 1	13-Oct-20	4	4	2	50%
HS - CS Foundations - ECS Follow-Up 1	17-Oct-20	0	3	0	0%
HS - CS Foundations - ECS Follow-Up 1	28-Oct-20	0	2	0	0%
HS - CS Foundations - ECS Follow-Up 1	31-Oct-20	4	7	2	29%
HS - CS Foundations - ECS Follow-Up 2	10-Nov-20	4	3	2	67%

HS - CS Foundations - ECS Follow-Up 2	14-Nov-20	2	2	1	50%
HS - CS Foundations - ECS Follow-Up 4	13-Mar-21	2	3	1	33%
HS - Programming using Java	14-Jun-21	176	15	8	53%
K5 - Coaches Academy	12-Jul-21	376	19	10	53%
K5 - Coaches Academy	14-Jun-21	504	19	15	79%
K5 - Coaches Academy CSFAB	21-Jun-21	240	6	6	100%
K5 - Coaches Academy Follow-Up 1	10-Oct-20	40	11	5	45%
K5 - Coaches Academy Follow-Up 1	21-Oct-20	10	14	5	36%
K5 - Coaches Academy Follow-Up 1	24-Oct-20	8	6	4	67%
K5 - Coaches Academy Follow-Up 1	6-Oct-20	88	26	11	42%
K5 - Coaches Academy Follow-Up 2	18-Nov-20	14	8	7	88%
K5 - Coaches Academy Follow-Up 2	3-Nov-20	8	9	4	44%
K5 - Coaches Academy Follow-Up 2	7-Nov-20	8	9	4	44%
K5 - Coaches Academy Follow-Up 2	7-Nov-20	4	4	2	50%
K5 - Coaches Academy	2-Feb-21	8	8	4	50%

Follow-Up 3					
K5 - Coaches Academy Follow-Up 3	6-Feb-21	8	5	4	80%
K5 - Coaches Academy Follow-Up 4	2-Mar-21	4	3	2	67%
K5 - Coaches Academy Follow-Up 4	6-Mar-21	4	4	2	50%
K5 - Coaches ARCS	21-Jun-21	1440	46	37	80%
K5 - Coaching	14-Jul-21	240	20	10	50%
K5 - Coaching	16-Jun-21	336	21	14	67%
K5 - CS Integration	13-Jul-21	128	28	16	57%
K5 - CS Integration - Section 2	13-Jul-21	72	25	9	36%
K5 - CS Integration	14-Jun-21	128	26	16	62%
K5 - CS Integration - Section 2	15-Jun-21	72	24	9	38%
K5 - CS Starter Pack	12-Jul-21	152	12	5	42%
K5 - Launching CS	12-Jul-21	160	34	20	59%
K5 - Launching CS - Section 2	12-Jul-21	104	27	13	48%
K5 - Launching CS	14-Jun-21	144	25	18	72%
K5 - Launching CS - Section 2	14-Jun-21	88	21	11	52%
K5 Coaches Academy - ARCS Cohort Follow-Up 1	10-Oct-20	104	18	13	72%
K5 Coaches Academy - ARCS Cohort Follow-Up 1	21-Oct-20	24	17	12	71%

K5 Coaches Academy - ARCS Cohort Follow-Up 1	24-Oct-20	10	14	5	36%
K5 Coaches Academy - ARCS Cohort Follow-Up 1	6-Oct-20	96	15	12	80%
K5 Coaches Academy - ARCS Cohort Follow-Up 2	18-Nov-20	44	27	22	81%
K5 Coaches Academy - ARCS Cohort Follow-Up 2	3-Nov-20	14	14	7	50%
K5 Coaches Academy - ARCS Cohort Follow-Up 2	7-Nov-20	18	14	9	64%
K5 Coaches Academy - ARCS Cohort Follow-Up 3	2-Feb-21	38	23	19	83%
K5 Coaches Academy - ARCS Cohort Follow-Up 3	6-Feb-21	22	19	11	58%
K5 Coaches Academy - ARCS Cohort Follow-Up 4	2-Mar-21	32	22	16	73%
K5 Coaches Academy - ARCS Cohort Follow-Up 4	6-Mar-21	22	17	11	65%
MS - Coaches Academy	12-Jul-21	88	8	3	38%
MS - Coaches Academy	14-Jun-21	120	5	3	60%
MS - Coaches Academy Follow-Up 1	10-Oct-20	0	8	0	0%
MS - Coaches Academy Follow-Up 1	21-Oct-20	4	7	2	29%
MS - Coaches Academy Follow-Up 1	24-Oct-20	2	2	1	50%

MS - Coaches Academy Follow-Up 1	6-Oct-20	8	2	1	50%
MS - Coaches Academy Follow-Up 2	18-Nov-20	0	3	0	0%
MS - Coaches Academy Follow-Up 2	3-Nov-20	2	2	1	50%
MS - Coaches Academy Follow-Up 2	7-Nov-20	0	1	0	0%
MS - Coaches Academy Follow-Up 3	2-Feb-21	0	2	0	0%
MS - Coaches Academy Follow-Up 4	2-Mar-21	0	2	0	0%
MS - Coaches Academy Follow-Up 4	6-Mar-21	2	1	1	100%
MS - Coaching	14-Jul-21	48	8	2	25%
MS - Coaching	16-Jun-21	72	8	3	38%
MS - CS Integration	13-Jul-21	64	20	8	40%
MS - CS Integration - Section 2	13-Jul-21	56	21	7	33%
MS - CS Integration	15-Jun-21	80	24	10	42%
MS - CS Starter Pack	12-Jul-21	72	9	2	22%
MS - CS Starter Pack	14-Jun-21	80	3	2	67%
MS - Elective - CSD	19-Jul-21	192	9	4	44%
MS - Elective - CSD Follow-Up 1	13-Oct-20	32	9	4	44%

MS - Elective - CSD Follow-Up 1	17-Oct-20	24	4	3	75%
MS - Elective - CSD Follow-Up 2	10-Nov-20	10	8	5	63%
MS - Elective - CSD Follow-Up 2	14-Nov-20	4	2	2	100%
MS - Elective - CSD Follow-Up 3	13-Feb-21	6	4	3	75%
MS - Elective - CSD Follow-Up 3	9-Feb-21	4	5	2	40%
MS - Elective - CSD Follow-Up 4	13-Mar-21	6	3	3	100%
MS - Elective - CSD Follow-Up 4	9-Mar-21	6	4	3	75%
MS - Launching CS	12-Jul-21	56	22	7	32%
MS - Launching CS - Section 2	12-Jul-21	56	21	7	33%
MS - Launching CS	14-Jun-21	88	26	11	42%
MS - Project GUTS	19-Jul-21	216	9	6	67%
MS SS/CS Coaches Academy DRK12	21-Jun-21	288	8	8	100%
Programming using Python	14-Jul-21	448	30	22	73%
Programming using Python - Section 2	14-Jul-21	264	29	13	45%
Programming using Python	16-Jun-21	432	39	20	51%

Programming using Python II	12-Jul-21	32	8	2	25%
Programming using Python II	19-Jul-21	296	32	14	44%
Programming using Python II	21-Jun-21	160	14	7	50%
Programming using Scratch	14-Jul-21	312	24	14	58%
Programming using Scratch - Section 2	14-Jul-21	144	21	8	38%
Programming using Scratch	16-Jun-21	312	33	14	42%
Programming using Scratch II	19-Jul-21	72	14	3	21%
Programming using Scratch II	21-Jun-21	216	21	10	48%
Reaching Across The Hallway Late-Entry PD	21-Aug-21	0	2	0	0%
WPS Diving into CS SOL's	3-Mar-21	112	16	15	94%
REC - Decoding Computer Science	28-Jun-21	16	9	8	89%
Faculty Training (Spring Training Day and Program Refresh)	17-Apr-21	210	45	42	93%
Teacher Design Academy (TDA)	5-Jun-21	39	13	13	100%
	12-Jun-21	65	13	13	100%
ASCE	13-Mar-21	65	13	13	100%
	20-Mar-21	65	13	13	100%
	27-Mar-21	65	13	13	100%
	13-Apr-21	19.5	13	13	100%
	18-May-21	19.5	13	13	100%

TDA Summer Innovation Camp	21-Jun-21	236.5	50	43	86%
CS Ready	Aug. 20 – July 21	3,420	95	95	100%
	TOTAL:	**15,337.5**	**1,657**	**1,010**	**61%**